CITY OF NEW BEDFORD
MASSACHUSETTS

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FREDERICK M. KALISZ, JR.
MAYOR

June 17, 2005

Ms. Kimberly Tisa
EPA New England, Region 1
1 Congress Street
Suite 1100 (CPT)
Boston, MA 02114-2023

Re: McCoy Field Site – Site Wetlands
225 Hathaway Boulevard
New Bedford, MA 02740

Dear Ms. Tisa:

The enclosed Risk-Based Cleanup Request has been prepared under 40 CFR 761.61(c) for polychlorinated biphenyl (PCB) remediation waste within the portion of the McCoy Field Site (the Site) hereinafter referred to as the "Site Wetlands".

The City's goal is to significantly reduce the risk associated with hazardous material that has migrated from the School Site to the Site Wetlands by excavating contaminated sediment and restoring the natural wetland community. Although the Method 3 Risk Assessment concludes that there is "No Significant Risk of harm to human health, public welfare, safety, and the environment," cleanup activities to achieve a 1 ppm cleanup goal are proposed.

Questions regarding this matter should be addressed to Alan D. Hanscom, LSP-of-Record, at (781) 255-1982, or to me at (508) 979-1487.

Very truly yours,

City of New Bedford

Scott Alfonse

Scott Alfonse
Director of Environmental Stewardship

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U.S. EPA, Region 1, ...

Cc: Larry Oliveira, School Department
Jacqueline Coucci, City of New Bedford
William DoCarmo, City Project Manager
Gerard Martin, MADEP
Evan Warner, Mount Vernon Group Architects
Alan D. Hanscom, LSP, BETA Group, Inc.

Wetlands Risk-Based Cleanup Request

Wetlands Site at McCoy Field
New Bedford, Massachusetts
RTN 4-15685

June 17, 2005

Prepared for:

City of New Bedford
New Bedford, Massachusetts

Prepared by:

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1.0 EXECUTIVE SUMMARY

1.1 Purpose of Submission

This document constitutes a Risk-Based Cleanup Request under 40 CFR 761.61(c) for polychlorinated biphenyl (PCB) remediation waste within the portion of the McCoy Field Site (the "Site") hereinafter referred to as the "Site Wetlands." Refer to the Locus Map (Figure 1) for the Site location. The Site Wetlands have been delineated, as shown on Figure 2. The "School Site", which encompasses landscaped areas, paved areas, and areas within the building footprint, has been addressed in a separate Risk-Based Cleanup Request for the School Site, last revised May 18, 2005.

The self-implementing cleanup level for *Bulk Polychlorinated biphenyl (PCB) remediation waste* in *high occupancy areas* under §761.61(a)(4)(i)(A) is ≤1 part per million (ppm) without further conditions, such as capping. However, use of self-implementing procedures to clean up sediments in freshwater ecosystems is prohibited under §761.61(a)(1)(i)(B). Therefore, even though the cleanup level proposed for sediment in the Site Wetlands is ≤1 ppm PCBs, this Risk-Based Cleanup Request must be submitted to demonstrate that the proposed cleanup level will pose "No Significant Risk" of injury to health or the environment.

1.2 Site Background

The property formerly known as McCoy Field (the Site), previously a recreational area occupied by three soccer fields, is the construction site for the New Keith Middle School. The Site is bounded by Hathaway Boulevard to the east, Durfee Street to the north, Summit Street to the west, and Nemasket Street to the south (Figure 2). Much of the material underlying the former soccer fields is relocated fill material from the current New Bedford High School location (east of the Site, across Hathaway Boulevard), where historic dumping and burning activities were reportedly performed prior to construction of the high school in the early 1970s. In or around 1994, the PCB-contaminated debris was spread across the Site and graded for the purposes of athletic field construction. The waste was covered with a sand/gravel leveling course and topsoil prior to construction of the soccer fields. The maximum depth of waste at the Site is 14 feet. As a result, the following distinct horizons are present at the Site:

- Topsoil;
- Sand/gravel layer;
- Fill material;
- Native organic silt; and,
- Native glacial till.

Embankments mark the edge of the fill placement along the northern and western boundaries of the filled area. These embankments lead down to deciduous wood swamp wetland areas, the "Site Wetlands", where fill material was not historically placed. Over time, constituents from the fill material migrated from the embankment areas to the Site Wetlands from wind erosion and storm water runoff. This Risk-Based Cleanup Request is being submitted to address cleanup of PCB remediation waste that has migrated to the Site Wetlands.

1.3 Wetlands Cleanup Plan

In recent consultation with United States Environmental Protection Agency (US EPA) and Massachusetts Department of Environmental Protection (DEP) representatives, it was determined that cleanup of sediments with residual concentrations of PCBs greater than 1 ppm is the appropriate remedy. The remediation effort will include the removal of up to six inches of impacted sediments at locations within the Site Wetlands. Excavated sediment will be transferred directly into trucks for disposal in a state-approved non-hazardous waste landfill as *PCB remediation waste* at <50 ppm. Removal of the contaminated material will be conducted under the supervision of a licensed site professional (LSP) as required by the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000.

Limited clearing of vegetation is proposed in order to access the surficial sediments to be removed. All disturbed areas will be restored, including replacement of the impacted sediments, replacement of vegetation with selected plant species, and seeding with wetlands seed mix.

1.4 Risk Characterization

The conclusion of a site-specific Method 3 Risk Characterization based on current site conditions is that, despite slight exceedances of the baseline hazard index (HI) of 1.0 for some environmental receptors, the Site is concluded to poses ***No Significant Risk of harm to human health, the environment, public welfare, and safety***. No institutional controls or engineered barriers were assumed in the risk characterization.

2.0 SITE BACKGROUND

2.1 Site History and Setting

BETA Group, Inc. (BETA) has been retained by the City of New Bedford School Department to provide LSP services related to the development of the New Keith Middle School at the location of the current McCoy Field (the "Site"). McCoy Field consists of approximately seven acres of land on the west side of Hathaway Boulevard, opposite New Bedford High School.

For the purposes of conducting cleanup, the Site has been divided into two sections, the "School Site" and the "Site Wetlands". PCB-contaminated debris from a former City burn dump was placed at the School Site in the late 1960s/early 1970s during construction of the New Bedford High School. In or around 1994, PCB-contaminated debris was spread across the School Site and graded for the purposes of athletic field construction.

Embankments mark the edge of the fill placement along the northern and western boundaries of the filled area. These embankments lead down to deciduous wood swamp wetland areas, the "Site Wetlands", where fill material was not historically placed. Over time, constituents from the fill material on the School Site migrated to the Site Wetlands from wind erosion and storm water runoff.

Pre-construction investigations of the School Site revealed the presence of Reportable Concentrations (RCs) of several contaminants in soil, including lead, barium, PCBs, and other semivolatile organic compounds (SVOCs). Initial subsurface investigations conducted in April 2000 by Miller Engineering & Testing, Inc. (Miller) identified four distinct horizons in soil in the playing field: surface soil, a gravel layer, fill (ash and construction and debris wastes), and native soil.

PCB analytical results from samples collected in March 2004 identified PCB concentrations at ≥50 ppm at the School Site. Based on these results and past Site activities, PCB-contaminated materials meet the definition of a *PCB remediation waste*, as defined under federal PCB regulations at 40 CFR 761.3. *PCB remediation waste* is regulated under the Toxic Substances Control Act (TSCA) and the PCB regulations at 40 CFR Part 761.

In accordance with a Consent Agreement and Final Order (CAFO) between EPA and the City of New Bedford (the City), the City has conducted sampling and removed the PCB-impacted soil located in the proposed utility corridors and in the vicinity of the proposed building pile caps and grade beams at the School Site. The CAFO also required development of a Work Plan that details the work. Revision 2 of the EPA Work Plan was appended to the CAFO executed by the EPA on May 21, 2004.

Since the original CAFO addressed only soil located in the utility corridors and in the vicinity of the proposed building pile caps and grade beams, the CAFO was amended on October 25, 2004 to encompass sampling and removal to be addressed under Revision 3 of the EPA Work Plan. This revision, submitted on November 5, 2004, expanded the scope or work to include sampling and removal of PCB-impacted soil for installation of the elevator shaft, acid neutralization tanks, above ground storage tank (AST) foundation, light stanchions, detention basins, drain lines, water line, and landscaped areas, as well as

for the remediation of the Site Wetlands and the neighboring properties in the vicinity of Durfee Street and Nemasket Street.

BETA has consulted with EPA and DEP concerning the submittal of this Risk-Based Cleanup Request for the Site Wetlands separate from the request already submitted for the cleanup of the School Site.

2.2 Nature of Contamination

2.2.1 Wetlands Sediment/Soil

Vanasse Hangen Brustlin, Inc. (VHB) collected sediment samples at the Site Wetlands in August 2000 and October 2002. PCBs were detected in the majority of these samples, with an average total PCB concentration of 0.52 ppm and a maximum concentration of 3.49 ppm. On August 11, 2000, sample G1 was collected within the Site Wetlands at the toe of the embankment in a heavily vegetated area in which ash fill was visible. The sample contained 18.4 ppm PCBs, constituting an Imminent Hazard as defined in the MCP at 310 CMR 40.0321(2). Access to the area in the vicinity of 18.4 ppm PCBs detection was restricted by School personnel on August 18, 2000, through installation of snow fencing and exclusion tape. Snow fence was used along the vegetation line, and exclusion tape was used in the woods/swamp where density of the vegetation prevented placement of snow fencing. The exclusion tape was later replaced with snow fencing after brush and vegetation was cleared out of the way.

In order to characterize wetlands sediment for ecological risk assessment, BETA collected 124 samples from the wetlands located to the west and north of McCoy Field in December 2004, January 2005, and April 2005. The laboratory analytical results of the sampling conducted by BETA are included in Tables 1 through 5. A compact disk (CD) containing electronic copies of the laboratory reports is included as Attachment C.

Since the Site Wetlands generally dry out in late summer, the material is evaluated as both soil and sediment. When evaluated as soil, the following constituents were detected at concentrations above the applicable Method 1 S-1 Soil Standards set forth in 310 CMR 40.0000:

Constituent	Locations of Exceedances	Range of Detected Concentrations (mg/kg)	Method 1 S-1 Soil Standard[1] (mg/kg)	U.S. EPA Residential Cleanup Level (mg/kg)
PCBs (as Aroclor 1254)	IW-2, WC.5-4.5, WC.5-27.5, WD-5, WD.5-2.5, WD.5-17.57, WD-6, WD-11, WD-12, WD-14, WD-15, WD-19, WD-23, WD-24, WD-25, WD-26, WD-27, WH-5 (above, plus) WC.5-22.5, WC.5-24.5, WD.5-3.5, WD-10, WD-17, WD-21, WE-3, WG-4.5, WI.5-5	0.014 – 11.8	2	1
Benzo(a)anthracene	IW-1, IW-2, WB-4, WC.5-14.5, WD.5-17.57	0.1 – 2.3	0.7	--
Benzo(b)fluoranthene	IW-1, IW-2, WC.5-14.5, WC.5-17.28, WD.5-17.57	0.12 – 2.9	0.7	--
Benzo(a)pyrene	IW-1, IW-2, WC.5-14.5, WD.5-17.57	0.11 – 2.3	0.7	--
Indeno(1,2,3-cd)pyrene	IW-2, WC.5-14.5	0.55 – 1.1	0.7	--
Lead	IW-2, WB-7, WC.5-14.5, WD.5-17.57, WD-7, WD-12, WD-23, WD-25, WE-3, WF-8	1.7 – 810	300	--

Notes:
1. Applicable to both S-1/GW-2 and S-1/GW-3 categories.
2. mg/kg – milligrams per kilogram (parts per million)

The following table lists constituents that were detected at concentrations above one or more of the following screening sediment benchmarks:

- Freshwater Sediment Screening Benchmarks (MADEP 2002b);
- If the above was not available, Effect Range-Low (ERL) Values (NOAA 1999); and,
- If neither of the above were available, values calculated from chronic surface water benchmark concentrations using the equilibrium partitioning approach and the 5th percentile organic carbon content of Site soil/sediment.

Constituent	No. Locations With Exceedances/Total Samples Analyzed	Range of Detected Concentrations (mg/kg)	Chronic Sediment Screening Benchmark (mg/kg)
PCBs (as Aroclor 1254)	92 / 124	0.014 – 11.8	0.0598 [1]
Anthracene	4 / 122	0.25 – 0.74	0.0572 [1]
Benzo(a)anthracene	13 / 122	0.1 – 2.3	0.108 [1]
Benzo(b)fluoranthene	5 / 122	0.12 – 2.9	1.116 [2]
Benzo(k)fluoranthene	2 / 122	0.13 – 1.4	0.617 [2]
Benzo(g,h,i)perylene	4 / 122	0.49 – 1.1	0.226 [2]
Benzo(a)pyrene	9 / 122	0.11 – 2.3	0.15 [1]
Chrysene	11 / 122	0.11 – 1.2	0.166 [1]
Fluoranthene	9 / 122	0.11 – 3.6	0.423 [1]
Fluorene	2 / 122	0.089 – 0.14	0.0774 [1]
Phenanthrene	8 / 122	0.095 – 2.6	0.204 [1]
Pyrene	19 / 122	0.12 – 5.6	0.195 [1]
Cadmium	48 / 123	0.2 – 5.75	0.99 [1]
Chromium (total)	7 / 123	3.07 – 79	43.4 [1]

Constituent	No. Locations With Exceedances/Total Samples Analyzed	Range of Detected Concentrations	Chronic Sediment Screening Benchmark
Lead	70 / 123	1.7 – 810	35.8 [1]
Mercury	28 / 123	0.015 – 2.06	0.18 [1]

1. MADEP (2002b).
2. Calculated value.

Wetlands surface sediment sample WD25, collected during the December 2004 sampling event, contained PCBs at a concentration exceeding 10 ppm. On January 18, 2005, the MADEP was notified of this Imminent Hazard (IH) condition. On January 19, 2005, BETA personnel took four additional samples located approximately six feet away from WD25 to determine the extent of PCB concentrations in excess of 10 ppm. The area surrounding sample WD25 was fenced off with high visibility orange plastic fencing to restrict access to the suspect area. Analytical results of the subsequent sampling indicated that the aerial extent of PCB concentrations greater than 10 ppm was limited to the original sample location WD25. In order to increase the frequency of sample locations and delineate the extent of sediment containing >1 ppm PCBs, additional samples were collected in April 2005.

2.2.2 Wetlands Surface Water

Surface water has not been sampled in the Site Wetlands. The Method 3 Risk Characterization Report, included as Attachment A, predicts sediment interstitial water concentrations from soil/sediment using the equilibrium partitioning approach.

2.2.3 Wetlands Groundwater

Groundwater has not been sampled in the Site Wetlands. Limited groundwater sampling conducted in the upland area indicated that concentrations of constituents of concern were very limited; all detected concentrations were below all applicable Method 1 Groundwater Standards. Groundwater for the Site will be monitored in accordance with the Long-Term Monitoring Plan, a draft of which was submitted with the Risk-Based Cleanup Request for the School Site (May 2005).

2.2.4 Adjacent Upland Soil

Site investigations in upland areas of the School Site identified the presence of constituents in soil and fill material at concentrations above applicable MCP Method 1 S-1 Soil Standards. While these conditions do not represent conditions in the Site Wetlands, they describe the upgradient source of contaminants that may have migrated to the Site Wetlands. The following constituents were detected at concentrations above Method 1 S-1 Soil Standards:

- PCBs (as Aroclor 1254)
- Benzidine
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(a)pyrene
- Chrysene
- Dibenzo(a,h)anthracene
- Indeno(1,2,3-cd)pyrene
- Total petroleum hydrocarbons (TPH)
- Arsenic
- Barium
- Lead

2.3 Wetlands Sampling Procedures

2.3.1 Sampling Equipment and Methodology

Samples were collected from wetlands sediment using disposable polyvinyl chloride (PVC) liners in conjunction with a hollow shaft sampler, extension rods, and a slam bar hammer. In order to maximize sample recovery, the sampler was driven down two feet into the sediment. Samples were collected from 0 to 6 inches. As necessary to obtain enough sample volume for laboratory analyses, the sleeve was re-advanced as close as possible to the original location. A dedicated disposable liner was used for each sample location. The hollow shaft sampler was decontaminated between sample locations.

2.3.2 Sample Locations

Samples were initially collected on approximately a 40-foot grid. In some cases where initial samples contained >1 ppm PCBs, the grid was tightened to a 20-foot grid and additional samples were collected. Refer to Figure 2 for the layout of the sampling grid and sample locations.

2.3.3 Analytical Parameters

Samples collected for ecological risk characterization were routinely analyzed for PCBs, RCRA 8 Metals, polynuclear aromatic hydrocarbons (PAHs), pesticides, and herbicides. Whenever a metal was detected in excess of 20 times its respective toxicity characteristic level, Toxicity Characteristic Leaching Procedure (TCLP) analysis was conducted. The following reporting limits were used, to the extent possible, by the laboratory:

- PCB = 10 parts per billion (ppb) per Aroclor
- Mercury = 10 ppb
- RCRA 8 Metals (except Mercury) combined = 100 ppb
- Pesticides/herbicides = 10 ppb

2.4 Wetlands Data Quality Assessment

Prior to excavation of contaminated sediment, a data quality assessment will be completed on the characterization sample results. Since the cleanup goal is defined with respect to PCBs, the assessment is focused on PCB analytical results.

2.4.1 Technical Holding Times

The laboratory holding times for both the sample prior to extraction and the extract prior to analysis will be evaluated for compliance with EPA's recommended holding times (14 days and 40 days, respectively).

2.4.2 Surrogate Recoveries

The surrogate recoveries will be compared to the acceptable range (40 to 140%).

2.4.3 Matrix Spike/Matrix Spike Duplicates

Matrix spikes and matrix spike duplicates will be evaluated with respect to the corresponding samples and the relative percent difference will be compared to the acceptable range (50%).

2.4.4 Method Blanks

The analytical results of the method blanks will be reviewed for the detection of target analytes.

Note: Post-excavation confirmatory sampling is to be performed and the horizontal and vertical limits of the excavated areas, including data quality assessment and validation, as discussed in Section 3.4.

3.0 WETLANDS CLEANUP PLAN

3.1 Schedule

3.1.1 Notice of Intent

A Notice of Intent (NOI) was filed with the New Bedford Conservation Commission (the Commission) on May 27, 2005 for Plot 69 Lot 125 and Plot 75 Lot 167. The NOI encompasses removal of contaminated soils and sediments from the wetland area located adjacent to the McCoy Field/Keith Middle School construction project. Refer to Attachment B for a copy of the NOI. A Public Hearing was held on June 14, 2005.

3.1.2 Order of Conditions

In anticipation of meeting the remediation and restoration schedule, we have requested that the Conservation Commission provide an Order of Conditions for this project by mid-July 2005.

3.1.3 Other Permit Requirements

A BRP WW10 Major Project Certification (Water Quality Certification) and Environmental Notification Form (ENF) have been filed with the DEP, with copies to the Army Corp of Engineers (ACOE). Refer to Attachments E and F, respectively. A Section 404 Permit has been filed with the ACOE (Attachment G). Due to the nature of the work and limited opportunity to remediate the wetlands during the dry weather time of the year, we anticipate final approval within six to eight weeks.

3.1.4 Wetlands Cleanup

Wetlands remediation is proposed to take place in September 2005, pending acquisition of the required permits in a timely manner.

3.1.5 Wetlands Restoration

All planting will occur at the beginning or end of the growing season. Fall plantings should be done before the first frost. However, shrubs and trees may be planted up to October 26th, weather permitting. Special conditions and contingency plans are outlined in the Wetlands Restoration Design included in Attachment B.

3.1.6 Conservation Commission Inspections

As discussed with the Conservation Commission, no Site work will be performed prior to a Site inspection and approval of the siltation controls by the Conservation Agent. Subsequently, BETA will coordinate Commission inspections of the Site Wetlands at the project milestones outlined in the NOI (Attachment B).

3.2 Remedial Approach

The remediation project includes the removal of up to six inches of impacted sediments at selected locations within the Site Wetlands (Figure 2). Limited clearing of vegetation is proposed in order to access the area in which the sediments are to be removed. All disturbed areas will be restored, including replacement of the impacted sediments, and seeding with wetlands seed mix.

3.2.1 Wetlands Sediment Removal

In recent consultation with US EPA and DEP representatives, it was determined that cleanup of sediments with residual concentrations of PCBs greater than 1 ppm is the appropriate remedy. Reference is made to the Executive Summary of the Method 3 Risk Characterization Report, included as Attachment A. Removal of the contaminated material will be conducted under the supervision of an LSP as required by the Massachusetts Contingency Plan, 310 CMR 40.0000.

We propose to implement the removal of up to six inches of PCB-impacted sediments at selected locations within the area illustrated on the attached site plan (Figure 2). Access to the area is proposed to include the following:

- Clearing of vegetation, as required, to access areas containing contaminated sediment;
- Physical removal of leaf litter, surface vegetation and surface sediment/soil to the limits direct by BETA's on-site representative;
- Excavation and removal of contaminated sediment, soil and vegetation, including live loading, transportation, and disposal at appropriately licensed disposal facilities; and
- Restoration of disturbed areas, including replacement of the removed sediment/soil with clean sandy soil and seeding with wetlands mix, similar to that used for the current slope stabilization project at McCoy Field.

The remediation contractor will use a combination of a Bobcat (or equivalent) loader, hand tools, and vacuum excavation to remove up to six inches of leaf litter, sediment, and soil from the proposed area of excavation. Trees larger than 4-inches in diameter will not be removed. Hand tools and vacuum excavation will be used to remove all soil within a five-foot radius of trees with a minimum 4-inch trunk diameter.

The temporary disturbance will be conducted at a time when the area is sufficiently dry or frozen to reduce impacts caused by the compaction of equipment. Once the contaminated areas have been excavated, the area will be restored and re-vegetated as described in Section 3.6. Prior to restoration, confirmation sampling will be conducted as detailed in Section 3.5.

3.2.2 Clearing

Remediation activities will result in some areas being cleared of existing vegetation and excavated. If large trees need to be cut to allow equipment access,

the stumps will remain to minimize soil disturbance. Leaving the stumps will also increase the likelihood that the trees will sprout new growth. Any debris, including slash and felled trees will be stockpiled on an upland area adjacent to the site work.

Individual large diameter trees that are Facultative or wetter will be evaluated and marked to remain in the wetland restoration area to take advantage of their shading effect. Selection of canopy trees will be performed by a qualified professional retained by BETA to oversee the wetland restoration activities. This will also create a pit and mound topography creating microenvironments.

3.2.3 Erosion Control

Embankments (edges of fill material) have been stabilized at a slope of 2:1 to 3:1. Any contaminated material remaining on the embankments was covered with a geotextile separation fabric, warning barrier, and three feet of clean soil.

Prior to the initiation of any Site activities, BETA will direct the placement of a row of staked hay bales in staggered formation along the limits of work (LOW) line. All work and all disturbances will occur within the LOW. In the event that flooding rains occur or excess water exists in the work area, dewatering of isolated work areas will be implemented as discussed in Section 3.2.5.

During the project, the remediation contractor will be implementing the provisions of the Storm Water Pollution Prevention Plan (SWPPP) dated September 2004. The SWPPP addresses proper procedures for such items as removing silt from trucks and adjacent roadways, preventing fuel spills, and managing stormwater flow. Additionally, the remediation contractor will be required to place jute erosion mats (and/or straw mulch on level areas) over open excavation areas to minimize erosion by stormwater runoff.

3.2.4 Temporary Access Ways

The remediation contractor will install temporary access ways, where necessary, to allow vehicle access to the areas of proposed excavation. These driveways will be constructed by the placement of non-woven geotextile fabric on the existing cleared ground surface followed by the placement of crushed stone. The access ways will be substantially removed upon the completion of excavation and these areas will be restored in accordance with the Wetland Restoration and Planting Plan included in Attachment B.

3.2.5 Dewatering

Depending on Site conditions, limited dewatering may be necessary to remove standing surface water prior to excavation. If such dewatering is necessary, the Contractor will install shallow groundwater extraction sumps (typically on the order of 4 feet deep) within the limits of work, to remove surface water and provide a limited lowering of the local water table during excavation. The extracted surface and groundwater will be pumped to an on-Site fractionation tank to provide settling of fines followed by discharge into a settling basin to be

constructed on-Site. This treatment and discharge will be performed under a National Pollutant Discharge Elimination System (NPDES) exclusion letter or an NPDES Construction General Permit (CGP), as appropriate, to be obtained by BETA from EPA.

3.3 Disposal Technology

Site investigations in upland areas of the School Site identified the presence of PCBs at concentrations ≥50 ppm. Based on these results and past Site activities, PCB-contaminated materials at the School Site meet the definition of a *PCB remediation waste* which is regulated under the TSCA and the PCB regulations at 40 CFR Part 761. Sediment in the Site Wetlands that was impacted from migration of PCBs from the School Site is also *PCB remediation waste*.

The PCB regulations require disposal of *PCB remediation waste* at ≥50 ppm in a TSCA-permitted disposal facility or a RCRA hazardous waste landfill; however, the highest concentration of PCBs detected in the Site Wetlands is 11.8 ppm. Therefore, sediment excavated from the Site Wetlands will be disposed in a state-approved non-hazardous waste landfill as *PCB remediation waste* at <50 ppm.

Excavated sediment will be transferred directly into trucks for removal from the Site and appropriate disposal. All material requiring off-site disposal shall be properly disposed off-site at appropriately permitted landfill or disposal facilities in good standing and holding current, valid permits and licenses in accordance with all federal, state, and local laws, regulations, ordinances, and procedures. Actual disposal facility locations will be identified to EPA prior to shipment of any wastes from the Site.

3.4 Cleanup Verification

3.4.1 Confirmation Sampling Plan

Subsequent to excavation of up to six inches of sediment in the designated remediation area, confirmation samples for vertical delineation of the remediation area will be collected in the same location as the characterization samples. Refer to Figure 2. Confirmation samples of the aerial extent of the remediation area will be collected along the perimeter of the excavation at approximately every 20 feet. The confirmation samples will be collected from the remaining top six inches (6 to 12 inches from the pre-remediation surface). Confirmation samples will be analyzed for PCBs only using EPA Method 8082. Sampling will be performed, to the extent possible, in accordance with the *Region I, EPA New England, Sediment Sampling Guidance* (Draft September 1998), so as to minimize water content to ensure usability (>30% solids) in a Tier I-type evaluation. Refer to the QA/QC Plan for Cleanup Verification (Appendix D).

3.4.2 Confirmation Sample Laboratory Analysis

As outlined in the QA/QC Plan for Cleanup Verification, the samples should be analyzed for percent solids prior to PCB analysis to ensure that >30% solids are

present. All samples with percent solids ≤30% will need to be pretreated (either air drying or freeze drying). Solvent extraction of the sample should only proceed once the percent solids >30%. Refer to the QA/QC Plan for Cleanup Verification (Appendix D).

3.4.3 Data Validation

The EPA Work Plan (November 2004) outlines the data validation and laboratory and field quality control requirements for samples collected at the Site. All data will undergo a Tier I-type evaluation whereby a completeness check is made. A modified Tier II-type review will be performed on all of the data using QC indicators. Refer to the QA/QC Plan for Cleanup Verification for specific requirements outlined for the Tier I- and Tier II-type evaluations to be implemented for Site Wetlands confirmation samples (Appendix D).

3.5 Wetlands Restoration

The surrounding bordering vegetated wetland (BVW) is well vegetated with a diverse community consisting of red maple trees and saplings, highbush blueberry shrubs, viburnum shrubs and emergent herbaceous plants. The remediation activities will result in approximately 0.87 acres of temporary alteration to the surrounding BVW. Once the area has been excavated and confirmation samples indicate that the remediation goal has been met, re-vegetation efforts can commence.

3.5.1 Planting Plan

The goal of the restoration effort will be to restore the natural plant community so that the impacts of the remediation are minimized. In accordance with 310 CMR 10.55, at least 75% of the surface area of the restoration area must be re-established with indigenous wetland plant species within two growing seasons. The planting plan is depicted in Figures 3.1 and 3.2. For additional details on the planting plan, consult the Wetland Restoration Design prepared by NAA and appended to the Notice of Intent (Attachment B).

The proposed final elevations are the same as current elevations. Any soil amendments needed to create a soil profile to support the planted wetland vegetation will be placed to bring the ground surface to finished elevation. The amended soils used for the replication area will consist of a mixture of 8-10% organic and the remainder of mineral materials. Once the project is complete, it is expected that there will be no loss or impairment of the resource area.

3.5.2 Inspections and Monitoring

BETA will coordinate a Commission inspection of the Site at the following project milestones:

- When erosion controls are installed, prior to any other work;
- After sediment has been excavated (Commission will inspect the soils to be replaced in the restored wetland at this time);

- After soils have been replaced (Commission will inspect plant material to be placed in restoration area at this time); and
- After final plantings are complete.

Any trees that do not remain alive for a minimum of one year from the completion of wetlands restoration will be replaced.

3.6 Contingency Plan

3.6.1 Unanticipated Conditions

Any "suspect" material (characteristically different material) will be segregated and temporarily stored on and covered with 20-mil polyethylene sheeting outside the wetland area until samples are collected, analyzed for suspected contamination. Upon review and evaluation of the results, appropriate disposal options will be assessed and implemented as soon as practicable. Temporary storage of wastes/materials to be segregated for separate characterization will not exceed 100 cubic yards (cy).

3.6.2 Unanticipated Wider Distribution

Since sediment in the Site Wetlands was impacted from material that migrated from the adjacent upland area, the impacted sediment is not expected to occur below the top six inches. Therefore, characterization samples were collected from the surface to six inches. In order to demonstrate that removal of the top six inches of sediment, as indicated in Figure 2, successfully removes the extent of material containing PCBs at concentrations exceeding 1 ppm, confirmation samples will be collected from 6 to 12 inches below pre-excavation grade. If any confirmation samples contain PCBs at concentrations exceeding 1 ppm, the remediation plan will be modified to include removal of the impacted sediment. Then additional confirmation samples will be collected from the top six inches of remaining sediment. This iterative process of excavating and collecting confirmation samples will be carried out until confirmation samples demonstrate that the remediation goal has been achieved.

3.6.3 Other Obstacles

At this time, no "other obstacles" are anticipated; however, the City will be monitoring all construction activities and will be prepared to address unforeseen circumstances that may arise.

4.0 HAZARD IDENTIFCATION

4.1 Constituents of Concern

Constituents of concern (COCs) for the human health risk characterization include the following:

- PCBs (as Aroclor 1254)
- Acenaphthene
- Anthracene
- Benzo(a)anthracene
- Benzo(b)fluoranthene
- Benzo(k)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(a)pyrene
- Chrysene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Phenanthrene
- Pyrene
- Barium
- Cadmium
- Chromium
- Lead
- Mercury
- Selenium

These COCs are all of the constituents detected in soil/sediment from the wetland area except for the following for the reasons provided:

Arsenic. Arsenic was not detected above either its Method 1 soil standard or its chronic sediment screening benchmark. All detected concentrations were at or below arsenic's natural soil background level (MADEP 2002d).

Silver. Silver was not detected above either its Method 1 Soil Standard or its chronic sediment screening benchmark. All detected concentrations were at or below silver's natural soil background level (MADEP 2002d).

Note that detected concentrations of acenaphthene, anthracene, benzo(a)-anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, benzo(a)pyrene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene, all of which are polycyclic aromatic hydrocarbons (PAHs), are all at or below background levels in natural soil. These constituents are retained because they are also assessed in sediment and there is no generally recognized background level for these COCs in sediment.

4.2 Environmental Fate and Transport Characteristics

Leaching

Leaching potential can be described by a constituent's water solubility and tendency to adsorb to organic carbon in soil. The water solubility of the organic COCs is low to moderate, and the tendency of the COCs to adsorb to organic carbon in soil is high. This indicates that significant desorption of organic COCs from soil or sediment to groundwater or surface water is not likely.

Metals vary in their water solubility depending on the form that exists in the soil or sediment; which is not known. However, most metals generally have a low water solubility and are strongly bound to soil and, with the exception of mercury, are considered non-volatile. Mercury can be volatile; however, this is typically seen at higher than ambient temperatures.

Volatilization

Volatilization potential can be described both by a constituent's vapor pressure and Henry's Law Constant (the ratio of vapor pressure to water solubility, describing the tendency to volatilize from water). The higher the vapor pressure and Henry's law constant, the higher the volatilization potential. The organic COCs generally have a low volatility. This indicates that significant volatilization of the organic COCs to air is unlikely.

Erosion

Due to the engineered barriers at the School Site (soil cap, asphalt cap, building), which will be maintained in accordance with the AUL, no fill material will be present at the ground surface of the School Site. Therefore, surface runoff from the School Site onto the Site Wetlands will not be a migration pathway.

Similarly, the engineered barriers will preclude the potential for entrainment of contaminated soil in the air. During construction activities in which contaminated material is exposed to the air, dust monitoring activities are conducted in accordance with the Soil Management and Dust Monitoring Section of the EPA Work Plan as well as Work Plan Attachment O (Proposed Waste and Regulated Soil Removal Plan).

Furthermore, the Storm Water Pollution Prevention Plan incorporates storm water management, stabilization practices, erosion and sediment control, and spill prevention. Hay bales and silt fences are in place along the toe of the entire embankment.

Persistence

PCBs, PAHs, and metals are generally considered to be persistent in the environment. Degradation of these constituents will occur slowly over time, or not at all (metals).

Bioaccumulation

PCBs, PAHs, and metals are generally considered to have the potential to bioaccumulate in animal or plant tissue.

Toxicity Values

Seven of the COCs are known or probable human carcinogens and assessed as such: PCBs, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, and indeno(1,2,3-cd)pyrene. The remainder is assessed as non-carcinogens. Chronic and sub-chronic toxicity values used to quantify the potential carcinogenic and non-carcinogenic human health risks of the COCs are presented on Table 7 and were obtained from the following sources:

- Integrated Risk Information System (IRIS) (U.S. EPA 2005);
- Proposed Revised Method 1 Numerical Standards and supporting documentation (MADEP 2004); and,
- Revisions to Dose-Response Values Used in Human Health Risk Assessment (MADEP 2004a).

Toxicity values used to assess non-carcinogenic health impacts are reference doses (RfD) for ingestion and dermal exposures and reference concentrations (RfC) for inhalation exposures. Toxicity values used to assess excess lifetime cancer risks are cancer slope factors (SF) for ingestion and dermal exposures and inhalation unit risk values (UR) for

inhalation exposures. Inter-route extrapolations were made (e.g., deriving inhalation toxicity values from oral values), where necessary, to quantify exposures. Brief toxicity profiles for the COCs are presented in Attachment A.

5.0 HUMAN HEALTH RISK CHARACTERIZATION

The Method 3 Risk Characterization, conducted in accordance with 310 CMR 40.0000, for Wetland Areas is based upon the results of sediment sampling conducted in the wetland area from December 2004 through April 2005. The results of samples collected from 2000 to 2002 are not considered due to the age of the data, high reporting limits, and the potential for wetlands sediment to have migrated over time. The objective of the human health risk characterization is to assess if pre-remediation Site conditions pose a potential health risk to exposed humans. AULs and engineered barriers are neither proposed for the Site Wetlands nor assumed in the risk characterization. The conclusion of the Method 3 Risk Characterization is that the Site Wetlands pose No Significant Risk of harm to human health. A summary of the human health risk characterization follows. Refer to Attachment A for a more detailed discussion.

5.1 Exposure Assessment

Human receptors potentially present at the future Keith Middle School include pedestrians, recreators, and trespassers, who may be exposed to COCs during recreational activities, dog-walking, and similar activities. Pedestrians, recreators, and trespassers are assessed in four age groups: children (between the ages of 1 to 8), youth (between the ages of 8 to 15), adults (over age 15), and a combined age group (ages 1 to 30).

The following receptor groups are not quantitatively assessed for the reasons provided:

- Residents: The Site is not currently used for residential purposes, nor is such use anticipated in the near future. Given the presence of the wetland, there is little likelihood that any residential structures will be built. Therefore, residential use of the wetlands is not assessed.
- Commercial Workers: The Site is not currently used for occupational purposes, nor is such use anticipated in the future. Given the presence of the wetland, there is little likelihood that any occupational structures will be built. Therefore, occupational use of the wetlands is not assessed.
- Construction Workers: Worker exposure and any protective measures will be addressed in the remediation contractor's Site-Specific Health & Safety Plan. Based upon the worker exposure assessment performed on the immediately adjacent site containing the same contaminants of concern, dust suppression measures (water spraying) will likely be required to reduce dusts to acceptable levels for potential inhalation by workers and/or to prevent off-site migration.

5.2 Potentially Complete Exposure Pathways

Potential exposure pathways that are quantitatively assessed are:

- Soil/sediment ingestion
- Soil/sediment dermal contact
- Inhalation of entrained soil/sediment particles
- Surface water ingestion
- Surface water dermal contact

All soil/sediment samples are assessed as soil since the wetland area typically dries up in summer, humans are more likely to have contact with soil than submerged sediment, and are more likely to access the Site during the warmer months when the wetlands have dried up. Since groundwater has been sampled at the Site and concentrations of COCs were either non-detect or below the applicable Method 1 Standards; exposure to groundwater is not assessed. Furthermore, since the COCs have a low volatility potential, exposure through volatilization pathways is also not assessed.

5.3 Exposure Factors

Exposure factors used to quantify human exposures were obtained from DEP (2004; 2002a; 1995), U.S. EPA (2004; 1997; 1996), or other, generally recognized guidance. In the absence of specific guidance, assumptions were made regarding the degree of exposure. Relative absorption factors (RAFs) are used to modify absorption through dermal intake and all constituents are conservatively assumed to be 100% absorbed through the oral exposure route. Estimation of the dermal intake of constituents from surface water is estimated using approaches described in U.S. EPA (2004).

5.4 Exposure Point Concentrations

This section evaluates the presence of hot spots and describes the derivation of exposure point concentrations (EPCs) for COCs in soil and groundwater.

5.4.1 Evaluation of Hot Spots

No hot spots, as defined in 310 CMR 40.0006, are contained within the data set.

5.4.2 Soil/Sediment Exposure Point Concentrations

The MCP allows use of the arithmetic mean as an EPC under certain conditions:

- Longer-term exposures are assessed;
- Constituents assessed are not lethal or associated with severe health effects from short-term exposures;
- Data available to characterize the Site are sufficient;
- The data do not exhibit a high degree of variability; and,
- The arithmetic mean is unlikely to underestimate the true mean.

Responses to these conditions are presented below:

- Chronic exposures are assessed for all receptors.
- None of the COCs is believed associated with acute health effects at the environmental concentrations detected; all detected concentrations are below upper concentration limits.
- The amount of data available for the Site is judged sufficient and the scope of analyses is appropriate for the type of release that occurred.
- While a certain amount of variability exists in the data, it is judged to represent spatial distribution of the contamination. All COCs meet the criteria in 310 CMR 40.0926(b) for demonstrating low variability, using the Method 1 S-1 Soil Standard as the applicable standard.

- Since environmental data are often log-normally distributed, the arithmetic mean concentration is likely to overestimate the true central tendency of the data.

5.4.3 Soil/Sediment Exposure Point Concentrations

COCs EPCs present in soil/sediment were calculated using arithmetic mean concentrations for all COCs. Non-detect constituents were included in the arithmetic mean at a concentration equal to one-half the quantitation limit.

The maximum detected concentration of PCBs at WD-25 (11.8 mg/kg) was further characterized by supplemental sampling at four locations immediately surrounding the original sample location (WD-25A, -25B, -25C, and -25D). Lower PCB concentrations were detected in these samples (0.419 mg/kg to 0.987 mg/kg). To avoid over-representing this location, the average of the five sample results was used to represent WD-25.

Sample location WE-6 was sampled on two occasions. The highest detected COC concentrations or the lowest quantitation limits (if not detected) were used to represent this location.

5.4.4 Sediment Interstitial Water and Surface Water Exposure Point Concentrations

Interstitial water EPCs were calculated from soil/sediment EPCs using the equilibrium partitioning approach. Overlying surface water EPCs were calculated from the predicted sediment interstitial water concentration. The predicted water concentrations for each COC are presented in Attachment A.

5.4.5 Air Exposure Point Concentrations

EPCs for soil particles in air were derived using the approach recommended by DEP (1995) to represent soil particle concentrations in air under "open field" conditions.

5.5 Quantitation of Exposure

COC exposure was quantified by combining exposure factors with EPCs to derive an average daily exposure (ADE) or dose (ADD). Risk characterization equations presented in MADEP (1995) were used to quantify exposures and are presented in the risk characterization spreadsheets as an appendix to Attachment A.

5.6 Risk Characterization

5.6.1 Methodology

Potential cancer risks and non-carcinogenic health hazards were quantified by combining estimated COC intakes with the COC's appropriate toxicity value for the exposure under consideration.

The risk characterization procedure for carcinogenic chemicals derives an excess lifetime cancer risk, which is the excess lifetime risk (i.e., over background risk levels) of incurring cancer from exposure to carcinogens. Cancer risks for each COC, pathway, and age group are summed to derive a total excess lifetime cancer risk, which is compared with the maximum acceptable cancer risk adopted by MADEP: a risk of one-in-one-hundred-thousand, denoted as $1x10^{-5}$. A total excess lifetime cancer risk at or below $1x10^{-5}$ represents no significant risk to human health.

The risk characterization procedure for non-carcinogenic chemicals derives a Hazard Quotient (HQ), which is the ratio of the estimated exposure or intake to an exposure or intake judged to pose no health hazard. HQs are derived separately for each age group. HQs for each COC and pathway are summed to derive a total Hazard Index (HI), which is compared with the maximum acceptable HI adopted by MADEP: 1.0. An HI at or below 1.0 represents "No Significant Risk" to human health.

5.6.2 Risk Characterization Results

Risk characterization calculations are summarized below.

RECREATIONAL/PEDESTRIAN/TRESPASSER RISK CHARACTERIZATION SUMMARY

Exposure Pathway	Child		Youth		Adult		Combined
	Hazard Index	Cancer Risk	Hazard Index	Cancer Risk	Hazard Index	Cancer Risk	Cancer Risk
Soil/sediment ingestion	0.2	$5x10^{-7}$	0.05	$1x10^{-7}$	0.03	$2x10^{-7}$	$8x10^{-7}$
Soil/sediment dermal contact	0.08	$3x10^{-7}$	0.02	$8x10^{-8}$	0.01	$9x10^{-8}$	$5x10^{-7}$
Inhalation of entrained soil particles	0.0006	$4x10^{-10}$	0.0006	$4x10^{-10}$	0.0006	$1x10^{-9}$	$2x10^{-9}$
Surface water ingestion	0.0005	$4x10^{-10}$	0.0002	$2x10^{-10}$	0.0001	$3x10^{-10}$	$9x10^{-10}$
Surface water dermal contact	0.0001	$1x10^{-8}$	0.00009	$1x10^{-8}$	0.00006	$2x10^{-8}$	$5x10^{-8}$
Total (all pathways)	**0.3**	**9×10^{-7}**	**0.07**	**2×10^{-7}**	**0.04**	**3×10^{-7}**	**1×10^{-6}**
Maximum Acceptable Level	**1.0**	**1×10^{-5}**	**1.0**	**1×10^{-5}**	**1.0**	**1×10^{-5}**	**1×10^{-5}**

Total HIs for adults, youth, and children are below the maximum acceptable HI (1.0). Total excess lifetime cancer risks for individual and combined age groups are below the maximum acceptable cancer risk. Therefore, the Site poses "No Significant Risk" of harm to human health to pedestrians, recreators, or trespassers.

6.0 ENVIRONMENTAL RISK CHARACTERIZATION

The objective of the environmental risk characterization is to assess if Site conditions in the wetland area pose a potential health risk to exposed environmental receptors. These potential health risks are assessed by performing a risk characterization consistent with DEP and U.S. EPA guidance for environmental risk characterizations.

6.1 Exposure Assessment

A number of threatened or endangered species or species of special concern have been identified in the New Bedford area. These species include terrestrial, avian, reptilian, and amphibian species. Although not specifically identified on the Site Wetlands, some of these species have the potential to be located on the Site Wetlands based on the species' preferred habitat.

Environmental receptors for which exposure and toxicological information is readily available have been selected to serve as surrogates for similar environmental species that may be present on Site Wetlands but for which exposure and toxicological information is not readily available. These receptors are summarized below:

- Earthworms (terrestrial invertebrates)
- Crustaceans (benthic aquatic invertebrates)
- Green frog (amphibians)
- American robin (omnivorous avian species)
- Red-tailed hawk (carnivorous avian species)
- Short-tailed shrew (insectivorous mammals)
- Raccoon (omnivorous mammals)

This set of surrogate receptors spans several trophic levels; including those in intimate contact with potentially impacted media (terrestrial and aquatic invertebrates and the green frog in its embryonic or juvenile form), organisms that feed on these organisms (shrew, raccoon, and robin) and organisms that feed on these primary feeders (raccoon and hawk). These organisms are also consistent with the limited environmental habitat offered by the Site Wetlands because of its urban setting, future planned use, limited size, and isolated character.

Because the wetlands are dry for a portion of the year, the wetlands are not believed to support a fish population. Therefore, species that feed primarily on fish (such as mink or heron) or inhabit primarily aquatic environments (sea otter, muskrat) are not assessed. Similarly, species that tend to inhabit habitats different from the Site (e.g. prairie voles), or have a similar or "less at risk" dietary habit (e.g., are primarily vegetarian) as the selected receptors (e.g., rabbits) are not assessed.

6.2 Potentially Complete Exposure Pathways

In general, invertebrates and amphibian species are directly exposed to impacted media, whereas higher trophic level species are exposed primarily through direct ingestion of

media and the diet. Exposure factors, such as food, water, and soil ingestion rates, and fraction of potentially affected food in the diet, were applied to quantify exposure of these organisms.

6.3 Sediment Interstitial Water and Surface Water Exposure Point Concentrations

Interstitial water EPCs were calculated from soil/sediment EPCs using the equilibrium partitioning approach. Overlying surface water EPCs were calculated from the predicted sediment interstitial water concentration. The predicted interstitial water COC concentrations were applied as EPCs to assess aquatic invertebrates; predicted overlying surface water COCs were applied as EPCs to assess amphibians, avian and mammalian receptor groups. The predicted water concentrations for each COC are presented in Attachment A.

6.4 Toxicity Assessment

6.4.1 Terrestrial Invertebrates

Since the assessment endpoint for this receptor group is survival, toxicity reference values (TRVs) based on acute toxicity in the form of soil concentrations in milligrams per kilogram (mg/kg), were selected.

6.4.2 Aquatic Invertebrates

Since the assessment endpoint for this receptor group is survival, TRVs based on acute toxicity in the form of water concentrations in micrograms per liter (µg/L) were selected. These TRVs are later compared with predicted sediment interstitial water concentrations. This form of the TRV was selected rather than bulk sediment concentrations (such as probable effects levels), because bulk sediment benchmark values do not consider Site-specific factors, such as the organic carbon content of the sediment. In addition, the constituent concentration in sediment interstitial water is typically considered the bioavailable fraction.

6.4.3 Amphibians

Available toxicological data for amphibians were obtained from the Reptile and Amphibian Toxicological Literature database (RATL, version 6), maintained by the Environment Canada's National Wildlife Research Centre.[1] Toxicological information was located for Aroclor 1254, benzo(a)pyrene, fluoranthene, cadmium, chromium, lead, mercury, and selenium. Species tested included various frogs, toads, and salamanders, typically tested in the egg or tadpole stage. The assessment endpoints for these receptors are survival, growth, and reproduction, so preference was given to studies identifying a no-observed-

[1] In presentation of lab data, the database states that results are expressed as "µg/L or ppm unless otherwise specified." Since µg/L and ppm differ by three orders of magnitude, the units were sometimes unclear if the data were not specifically labeled. Data associated with uncertain presentation of units were typically not used.

adverse-effect-level (NOAEL). However, since most information was based on acute effects, the following scheme was applied to approximate a chronic effects-based TRV:

Where LC_{50} is the median lethal concentration and EC_{50} is the median effective concentration (for effects other than lethality). The available toxicity values and resultant TRVs are summarized in Appendix A.

6.4.4 Avian Species

The assessment endpoints for this receptor group are survival, growth, and reproduction. TRVs are based on chronic toxicity and are in the form of an intake in milligrams per kilogram of body weight per day (mg/kgBW-dy). Unlike benthic and aquatic invertebrates and amphibians, two TRVs were selected for use: one TRV representing a more conservative level of protection (TRV-Low) and one representing a more moderate level of protection (TRV-High). Several sources of avian TRVs were identified, including TRVs from U.S. EPA, U.S. Department of Energy, and other sources.

In general, when two or more TRV values were available for a TRV type (i.e., low or high), the more commonly adopted value or a value representing the middle of the distribution was typically (but not always) selected for use. In some cases [as in the U.S. EPA (1999) value for PAHs, discussed in the footnote to Table 18, Appendix A], the study design was judged to be inappropriate for use in the risk characterization and was not applied. If a TRV-High value was not available for a COC (all of the PAHs), the TRV-Low value was applied for both risk characterization calculations.

6.4.5 Mammalian Species

The assessment endpoints for this receptor group are survival, growth, and reproduction. TRVs are based on chronic toxicity and are in the form of an intake (mg/kgBW-dy). Two TRVs were selected for use: one TRV representing a more conservative level of protection (TRV-Low) and one representing a more moderate level of protection (TRV-High). Several sources of mammalian TRVs were identified, including TRVs from U.S. EPA, U.S. Department of Energy, and other sources.

In general, when two or more TRV values were available for a TRV type (i.e., low or high), the more commonly adopted value or a value representing the middle of the distribution was typically selected for use.

6.5 Risk Characterization

6.5.1 Terrestrial Invertebrates

Soil EPCs are compared with acute effects-based soil TRVs for the assessment endpoint of survival (chronic TRVs were applied when acute TRVs could not be located).

6.5.2 Aquatic Invertebrates

Since COCs in interstitial water will be more bioavailable than those bound up on sediment particles, predicted interstitial water concentrations are compared with acute effects-based TRVs for the assessment endpoint of survival.

6.5.3 Amphibian Receptors

Since frogs typically lay their eggs on the water surface or attached to floating or submerged vegetation and tadpoles stay within the water column, one-tenth of predicted interstitial water concentrations are used to represent surface water EPCs. Surface water EPCs are compared with chronic effects-based surface water TRVs for the assessment endpoint of survival, growth, and reproduction.

6.5.4 Avian Receptors

Surrogate avian receptors are the American robin and the red-tailed hawk. These birds may have direct contact with COCs contained in surface water and soil/sediment in the wetlands, as well as through their diet.

6.5.5 Mammalian Receptors

Surrogate mammalian receptors are the short-tailed shrew and raccoons. These animals may have direct contact with COCs contained in surface water and soil/sediment in the wetlands, as well as through their diet.

7.0 WRITTEN CERTIFICATION

Pursuant to §761.61(a)(3)(i)(E), Scott Alfonse, as a representative of the City of New Bedford and the party conducting the cleanup, hereby certifies that all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file at:

BETA Group, Inc.
315 Norwood Park South
Norwood, MA 02062

and are available for EPA inspection.

City of New Bedford

Scott Alfonse
Director of Environmental Stewardship

6/17/05
Date

8.0 REFERENCES

U.S. EPA (1998). 40 CFR 761.61. "Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions." *Code of Federal Regulations*.

Table 1

Laboratory Analytical Results – Polychlorinated Biphenyls

McCoy Field
Project No. 02685

Table 1
Laboratory Analytical Results - Polychlorinated Biphenyls
Wetlands

				Total PCBs	PCB-1221			PCB-1232			PCB-1016/1242			PCB-1248			PCB-1254			PCB-1260			PCB-1262			PCB-1268		
				(ug/kg)	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL
			RCS-1	2,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
			Turnkey Acceptance Limit	50,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
			UCL	100,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Sample Identification	Depth	Collection Date	Analysis Date																										
IW1-0-6"	0-6"	12/23/04	1/7/05	270	ND	U	20	ND	U	10	ND	U	10	ND	U	10	270	~	10	ND	U	10	ND	U	10	ND	U	10
IW2-0-6"	0-6"	12/23/04	1/11/05	**5,710**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	5,710	~	10	ND	U	10	ND	U	10	ND	U	10
WA3-0-6"	0-6"	12/21/04	12/23/04	110	ND	U	11	ND	U	5	ND	U	5	ND	U	5	110	~	5	ND	U	5	ND	U	5	ND	U	5
Duplicate 201 (WA3-0-6")	0-6"	12/21/04	12/23/04	230	ND	U	12	ND	U	6	ND	U	6	ND	U	6	230	~	6	ND	U	6	ND	U	6	ND	U	6
WB4-0-6"	0-6"	12/21/04	12/23/04	68	ND	U	21	ND	U	10	ND	U	10	ND	U	10	68	~	10	ND	U	10	ND	U	10	ND	U	10
WB5-0-6"	0-6"	12/21/04	12/23/04	80	ND	U	28	ND	U	14	ND	U	14	ND	U	14	80	~	14	ND	U	14	ND	U	14	ND	U	14
WB6-0-6"	0-6"	12/21/04	12/23/04	113	ND	U	56	ND	U	28	ND	U	28	ND	U	28	113	~	28	ND	U	28	ND	U	28	ND	U	28
WB7-0-6"	0-6"	12/21/04	12/23/04	ND	ND	U	49	ND	U	25	ND	U	25	ND	U	25	ND	U	25	ND	U	25	ND	U	25	ND	U	25
WC-4	0-6"	12/21/04	12/27/04	36	ND	U	45	ND	U	23	ND	U	23	ND	U	23	36	~	23	ND	U	23	ND	U	23	ND	U	23
WC-5	0-6"	12/21/04	12/27/04	74	ND	U	52	ND	U	26	ND	U	26	ND	U	26	74	~	26	ND	U	26	ND	U	26	ND	U	26
WC-6	0-6"	12/21/04	12/27/04	107	ND	U	42	ND	U	21	ND	U	21	ND	U	21	107	~	21	ND	U	21	ND	U	21	ND	U	21
WC7-0-6"	0-6"	12/21/04	12/23/04	640	ND	U	38	ND	U	19	ND	U	19	ND	U	19	640	~	19	ND	U	19	ND	U	19	ND	U	19
WC8-0-6"	0-6"	12/21/04	12/23/04	58	ND	U	56	ND	U	28	ND	U	28	ND	U	28	58	~	28	ND	U	28	ND	U	28	ND	U	28
WC18-0-6"	0-6"	12/23/04	12/30/04	26	ND	U	20	ND	U	10	ND	U	10	ND	U	10	26	~	10	ND	U	10	ND	U	10	ND	U	10
WC19-0-6"	0-6"	12/23/04	1/7/05	110	ND	U	20	ND	U	10	ND	U	10	ND	U	10	110	~	10	ND	U	10	ND	U	10	ND	U	10
WC20-0-6"	0-6"	12/23/04	1/7/05	104	ND	U	20	ND	U	10	ND	U	10	ND	U	10	104	~	10	ND	U	10	ND	U	10	ND	U	10
WC21-0-6"	0-6"	12/23/04	1/7/05	100	ND	U	20	ND	U	10	ND	U	10	ND	U	10	100	~	10	ND	U	10	ND	U	10	ND	U	10
WC22-0-6"	0-6"	12/23/04	12/30/04	68	ND	U	20	ND	U	10	ND	U	10	ND	U	10	68	~	10	ND	U	10	ND	U	10	ND	U	10
WC23-0-6"	0-6"	12/23/04	1/7/05	159	ND	U	20	ND	U	10	ND	U	10	ND	U	10	159	~	10	ND	U	10	ND	U	10	ND	U	10
WC24-0-6"	0-6"	12/23/04	12/30/04	14	ND	U	20	ND	U	10	ND	U	10	ND	U	10	14	~	10	ND	U	10	ND	U	10	ND	U	10
WC25-0-6"	0-6"	12/23/04	12/30/04	71	ND	U	20	ND	U	10	ND	U	10	ND	U	10	71	~	10	ND	U	10	ND	U	10	ND	U	10
WC26-0-6"	0-6"	12/23/04	12/30/04	76	ND	U	20	ND	U	10	ND	U	10	ND	U	10	76	~	10	ND	U	10	ND	U	10	ND	U	10
WC27-0-6"	0-6"	12/23/04	12/30/04	41	ND	U	20	ND	U	10	ND	U	10	ND	U	10	41	~	10	ND	U	10	ND	U	10	ND	U	10
WC.5-4.5	0-6"	4/22/05	4/30/05	**4,069**	ND	U	173	ND	U	87	ND	U	87	ND	U	87	2,315	~	87	1,754	~	87	ND	U	87	ND	U	87
WC.5-5.5	0-6"	4/22/05	4/30/05	90	ND	U	124	ND	U	62	ND	U	62	ND	U	62	90	~	62	ND	U	62	ND	U	62	ND	U	62
WC.5-6.5	0-6"	4/22/05	4/30/05	ND	ND	U	169	ND	U	85	ND	U	85	ND	U	85	ND	U	85	ND	U	85	ND	U	85	ND	U	85
WC.5-8.5	0-6"	4/22/05	4/30/05	94	ND	U	112	ND	U	56	ND	U	56	ND	U	56	94	~	56	ND	U	56	ND	U	56	ND	U	56
WC.5-9.5	0-6"	4/22/05	4/30/05	135	ND	U	131	ND	U	66	ND	U	66	ND	U	66	135	~	66	ND	U	66	ND	U	66	ND	U	66
WC.5-10.5	0-6"	4/20/05	4/26/05	ND	ND	U	89	ND	U	44	ND	U	44	ND	U	44	ND	U	44	ND	U	44	ND	U	44	ND	U	44
WC.5-11.5	0-6"	4/20/05	4/26/05	36	ND	U	60	ND	U	30	ND	U	30	ND	U	30	36	~	30	ND	U	30	ND	U	30	ND	U	30
WC.5-12.5	0-6"	4/20/05	4/26/05	ND	ND	U	74	ND	U	37	ND	U	37	ND	U	37	ND	U	37	ND	U	37	ND	U	37	ND	U	37
WC.5-13.5	0-6"	4/20/05	4/26/05	232	ND	U	70	ND	U	35	ND	U	35	ND	U	35	232	~	35	ND	U	35	ND	U	35	ND	U	35
Duplicate 222 (WC.5-13.5)	0-6"	4/20/05	4/26/05	105	ND	U	54	ND	U	27	ND	U	27	ND	U	27	105	~	27	ND	U	27	ND	U	27	ND	U	27
WC.5-14.5	0-6"	4/20/05	4/26/05	922	ND	U	41	ND	U	20	ND	U	20	ND	U	20	922	~	20	ND	U	20	ND	U	20	ND	U	20
WC.5-14.5MS	0-6"	4/20/05	4/26/05	500	ND	U	35	ND	U	18	ND	U	18	ND	U	18	500	~	18	ND	U	18	ND	U	18	ND	U	18
WC.5-14.5MSD	0-6"	4/20/05	4/26/05	90	ND	U	38	ND	U	19	ND	U	19	ND	U	19	90	~	19	ND	U	19	ND	U	19	ND	U	19
WC.5-15.5	0-6"	4/20/05	4/26/05	175	ND	U	43	ND	U	22	ND	U	22	ND	U	22	175	~	22	ND	U	22	ND	U	22	ND	U	22
WC.5-16.5	0-6"	4/20/05	4/26/05	ND	ND	U	14	ND	U	7	ND	U	7	ND	U	7	ND	U	7	ND	U	7	ND	U	7	ND	U	7
WC.5-17.14	0-6"	4/20/05	4/26/05	441	ND	U	55	ND	U	28	ND	U	28	ND	U	28	441	~	28	ND	U	28	ND	U	28	ND	U	28
WC.5-17.28	0-6"	4/20/05	4/26/05	546	ND	U	26	ND	U	13	ND	U	13	ND	U	13	546	~	13	ND	U	13	ND	U	13	ND	U	13
WC.5-18.5	0-6"	4/25/05	5/2/05	135	ND	U	34	ND	U	17	ND	U	17	ND	U	17	135	~	17	ND	U	17	ND	U	17	ND	U	17

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Table 1
Laboratory Analytical Results - Polychlorinated Biphenyls
Wetlands

				Total PCBs	PCB-1221			PCB-1232			PCB-1016/1242			PCB-1248			PCB-1254			PCB-1260			PCB-1262			PCB-1268		
				(ug/kg)	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL
			RCS-1	2,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
			Turnkey Acceptance Limit	50,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
			UCL	100,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Sample Identification	**Depth**	**Collection Date**	**Analysis Date**																									
WC.5-19.5	0-6"	4/25/05	5/2/05	ND	ND	U	24	ND	U	12	ND	U	12	ND	U	12	ND	U	12	ND	U	12	ND	U	12	ND	U	12
WC.5-20.5	0-6"	4/25/05	5/2/05	ND	ND	U	39	ND	U	19	ND	U	19	ND	U	19	ND	U	19	ND	U	19	ND	U	19	ND	U	19
WC.5-21.5	0-6"	4/25/05	5/2/05	72	ND	U	33	ND	U	17	ND	U	17	ND	U	17	72	~	17	ND	U	17	ND	U	17	ND	U	17
WC.5-22.5	0-6"	4/25/05	5/2/05	**1,160**	ND	U	42	ND	U	21	ND	U	21	ND	U	21	1,160	~	21	ND	U	21	ND	U	21	ND	U	21
WC.5-23.5	0-6"	4/25/05	5/2/05	379	ND	U	38	ND	U	19	ND	U	19	ND	U	19	379	~	19	ND	U	19	ND	U	19	ND	U	19
WC.5-24.5	0-6"	4/25/05	5/2/05	**1,520**	ND	U	46	ND	U	23	ND	U	23	ND	U	23	1,520	U	23	ND	U	23	ND	U	23	ND	U	23
Duplicate 223 (WC.5-24.5)	0-6"	4/25/05	5/2/05	67	ND	U	64	ND	U	32	ND	U	32	ND	U	32	67	~	32	ND	U	32	ND	U	32	ND	U	32
WC.5-25.5	0-6"	4/25/05	5/2/05	119	ND	U	35	ND	U	17	ND	U	17	ND	U	17	119	~	17	ND	U	17	ND	U	17	ND	U	17
WC.5-26.5	0-6"	4/25/05	5/2/05	140	ND	U	39	ND	U	19	ND	U	19	ND	U	19	140	~	19	ND	U	19	ND	U	19	ND	U	19
WC.5-27.5	0-6"	4/25/05	5/2/05	**2,820**	ND	U	24	ND	U	12	ND	U	12	ND	U	12	2,820	U	12	ND	U	12	ND	U	12	ND	U	12
WD-3 (0-6")	0-6"	12/22/04	12/27/04	160	ND	U	20	ND	U	10	ND	U	10	ND	U	10	160	~	10	ND	U	10	ND	U	10	ND	U	10
WD-4 (0-6")	0-6"	12/22/04	12/27/04	240	ND	U	20	ND	U	10	ND	U	10	ND	U	10	240	~	10	ND	U	10	ND	U	10	ND	U	10
WD-4.5	0-6"	4/22/05	4/30/05	330	ND	U	132	ND	U	66	ND	U	66	ND	U	66	330	~	66	ND	U	66	ND	U	66	ND	U	66
WD-5 (0-6")	0-6"	12/22/04	12/27/04	**4,730**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	4,730	~	10	ND	U	10	ND	U	10	ND	U	10
Duplicate 202 (WD-5-0-6")	0-6"	12/22/04	12/27/04	**3,740**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	3,740	~	10	ND	U	10	ND	U	10	ND	U	10
WD-6 (0-6")	0-6"	12/22/04	12/27/04	**2,250**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	2,250	~	10	ND	U	10	ND	U	10	ND	U	10
WD-6.5	0-6"	4/22/05	4/30/05	93	ND	U	142	ND	U	71	ND	U	71	ND	U	71	93	~	71	ND	U	71	ND	U	71	ND	U	71
WD-7	0-6"	12/21/04	12/27/04	571	ND	U	28	ND	U	14	ND	U	14	ND	U	14	571	~	14	ND	U	14	ND	U	14	ND	U	14
WD8-0-6"	0-6"	12/21/04	12/23/04	151	ND	U	42	ND	U	21	ND	U	21	ND	U	21	151	~	21	ND	U	21	ND	U	21	ND	U	21
WD-9 (0-6")	0-6"	12/22/04	12/27/04	560	ND	U	20	ND	U	10	ND	U	10	ND	U	10	560	~	10	ND	U	10	ND	U	10	ND	U	10
WD-10 (0-6")	0-6"	12/22/04	12/27/04	**1,020**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	1,020	~	10	ND	U	10	ND	U	10	ND	U	10
WD-10.5	0-6"	4/20/05	4/26/05	64	ND	U	65	ND	U	33	ND	U	33	ND	U	33	64	~	33	ND	U	33	ND	U	33	ND	U	33
WD-11 (0-6")	0-6"	12/22/04	12/27/04	**5,420**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	5,420	~	10	ND	U	10	ND	U	10	ND	U	10
WD-12 (0-6")	0-6"	12/22/04	12/27/04	**4,060**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	4,060	~	10	ND	U	10	ND	U	10	ND	U	10
WD-13 (0-6")	0-6"	12/22/04	12/27/04	ND	ND	U	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10
WD-14 (0-6")	0-6"	12/22/04	12/27/04	**8,910**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	8,910	~	10	ND	U	10	ND	U	10	ND	U	10
WD-15 (0-6")	0-6"	12/22/04	12/27/04	**3,900**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	3,900	~	10	ND	U	10	ND	U	10	ND	U	10
WD-15.5	0-6"	4/20/05	4/26/05	33	ND	U	20	ND	U	10	ND	U	10	ND	U	10	33	~	10	ND	U	10	ND	U	10	ND	U	10
WD-16 (0-6")	0-6"	12/22/04	12/27/04	ND	ND	U	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10
WD-17 (0-6")	0-6"	12/22/04	5/17/06	**1,080**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	1,080	~	10	ND	U	10	ND	U	10	ND	U	10
WD-17.46	0-6"	4/20/05	4/26/05	282	ND	U	52	ND	U	26	ND	U	26	ND	U	26	282	~	26	ND	U	26	ND	U	26	ND	U	26
WD-17.57	0-6"	4/20/05	4/26/05	35	ND	U	25	ND	U	13	ND	U	13	ND	U	13	35	~	13	ND	U	13	ND	U	13	ND	U	13
WD18-0-6"	0-6"	12/23/04	1/4/05	724	ND	U	20	ND	U	10	ND	U	10	ND	U	10	724	~	10	ND	U	10	ND	U	10	ND	U	10
WD19-0-6"	0-6"	12/23/04	1/4/05	**2,090**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	2,090	~	10	ND	U	10	ND	U	10	ND	U	10
WD20-0-6"	0-6"	12/23/04	12/30/04	22	ND	U	20	ND	U	10	ND	U	10	ND	U	10	22	~	10	ND	U	10	ND	U	10	ND	U	10
WD21-0-6"	0-6"	12/23/04	1/4/05	**1,390**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	1,390	~	10	ND	U	10	ND	U	10	ND	U	10
WD21-0-6" MS	0-6"	12/23/04	1/4/05	479	ND	U	20	ND	U	10	ND	U	10	ND	U	10	479	~	10	ND	U	10	ND	U	10	ND	U	10
WD21-0-6" MSD	0-6"	12/23/04	1/4/05	547	ND	U	20	ND	U	10	ND	U	10	ND	U	10	547	~	10	ND	U	10	ND	U	10	ND	U	10
WD22-0-6"	0-6"	12/23/04	1/4/05	96	ND	U	20	ND	U	10	ND	U	10	ND	U	10	96	~	10	ND	U	10	ND	U	10	ND	U	10
WD23-0-6"	0-6"	12/23/04	1/4/05	**9,480**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	9,480	~	10	ND	U	10	ND	U	10	ND	U	10
WD24-0-6"	0-6"	12/23/04	1/7/05	**3,850**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	3,850	~	10	ND	U	10	ND	U	10	ND	U	10

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Table 1
Laboratory Analytical Results - Polychlorinated Biphenyls
Wetlands

				Total PCBs	PCB-1221			PCB-1232			PCB-1016/1242			PCB-1248			PCB-1254			PCB-1260			PCB-1262			PCB-1268		
				(ug/kg)	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL
			RCS-1	2,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
			Turnkey Acceptance Limit	50,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
			UCL	100,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Sample Identification	Depth	Collection Date	Analysis Date																									
WD25-0-6"	0-6"	12/23/04	1/4/05	**11,800**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	11,800	~	10	ND	U	10	ND	U	10	ND	U	10
WD25-A-0-6"	0-6"	1/19/05	1/20/05	419	ND	U	100	ND	U	50	ND	U	50	ND	U	50	419	~	50	ND	U	50	ND	U	50	ND	U	50
WD25-B-0-6"	0-6"	1/19/05	1/20/05	482	ND	U	96	ND	U	48	ND	U	48	ND	U	48	482	~	48	ND	U	48	ND	U	48	ND	U	48
WD25-C-0-6"	0-6"	1/19/05	1/20/05	459	ND	U	99	ND	U	50	ND	U	50	ND	U	50	459	~	50	ND	U	50	ND	U	50	ND	U	50
WD25-D-0-6"	0-6"	1/19/05	1/20/06	987	ND	U	100	ND	U	50	ND	U	50	ND	U	50	987	~	50	ND	U	50	ND	U	50	ND	U	50
WD26-0-6"	0-6"	12/23/04	1/10/05	**2,770**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	2,770	~	10	ND	U	10	ND	U	10	ND	U	10
Duplicate 203 (WD26-0-6")	0-6"	12/23/04	1/4/05	**5,510**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	5,510	~	10	ND	U	10	ND	U	10	ND	U	10
WD27-0-6"	0-6"	12/23/04	1/10/05	**4,100**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	4,100	~	10	ND	U	10	ND	U	10	ND	U	10
WD.5-2.5	0-6"	4/25/05	5/2/05	**4,340**	ND	U	27	ND	U	14	ND	U	14	ND	U	14	4,340	~	14	ND	U	14	ND	U	14	ND	U	14
WD.5-3	0-6"	4/25/05	5/2/05	655	ND	U	32	ND	U	16	ND	U	16	ND	U	16	655	~	16	ND	U	16	ND	U	16	ND	U	16
WD.5-3.5	0-6"	4/25/05	5/2/05	**1,130**	ND	U	111	ND	U	56	ND	U	56	ND	U	56	1,130	~	56	ND	U	56	ND	U	56	ND	U	56
WD.5-3.5MS	0-6"	4/25/05	5/2/05	**1,780**	ND	U	94	ND	U	47	ND	U	47	ND	U	47	1,780	~	47	ND	U	47	ND	U	47	ND	U	47
WD.5-3.5MDS	0-6"	4/25/05	5/2/05	**3,010**	ND	U	150	ND	U	75	ND	U	75	ND	U	75	3,010	~	75	ND	U	75	ND	U	75	ND	U	75
WD.5-4.5	0-6"	4/22/05	4/30/05	ND	ND	U	165	ND	U	83	ND	U	83	ND	U	83	ND	U	83	ND	U	83	ND	U	83	ND	U	83
WD.5-5.5	0-6"	4/22/05	4/30/05	ND	ND	U	157	ND	U	78	ND	U	78	ND	U	78	ND	U	78	ND	U	78	ND	U	78	ND	U	78
WD.5-6.5	0-6"	4/22/05	4/30/05	ND	ND	U	160	ND	U	80	ND	U	80	ND	U	80	ND	U	80	ND	U	80	ND	U	80	ND	U	80
WD.5-17.14	0-6"	4/20/05	4/26/05	65	ND	U	44	ND	U	22	ND	U	22	ND	U	22	65	~	22	ND	U	22	ND	U	22	ND	U	22
WD.5-17.28	0-6"	4/20/05	4/26/05	ND	ND	U	26	ND	U	13	ND	U	13	ND	U	13	ND	U	13	ND	U	13	ND	U	13	ND	U	13
WD.5-17.46	0-6"	4/20/05	4/26/05	118	ND	U	45	ND	U	23	ND	U	23	ND	U	23	118	~	23	ND	U	23	ND	U	23	ND	U	23
WD.5-17.57	0-6"	4/20/05	4/26/05	**9,380**	ND	U	34	ND	U	17	ND	U	17	ND	U	17	9,380	~	17	ND	U	17	ND	U	17	ND	U	17
WE-2.5	0-6"	4/25/05	5/2/05	777	ND	U	31	ND	U	15	ND	U	15	ND	U	15	777	~	15	ND	U	15	ND	U	15	ND	U	15
WE-3 (0-6")	0-6"	12/22/04	12/27/04	**1,950**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	1,950	~	10	ND	U	10	ND	U	10	ND	U	10
WE-3.5	0-6"	4/25/05	5/2/05	ND	ND	U	166	ND	U	83	ND	U	83	ND	U	83	ND	U	83	ND	U	83	ND	U	83	ND	U	83
WE-4 (0-6")	0-6"	12/22/04	12/27/04	122	ND	U	20	ND	U	10	ND	U	10	ND	U	10	122	~	10	ND	U	10	ND	U	10	ND	U	10
WE-5 (0-6")	0-6"	12/22/04	12/27/04	320	ND	U	20	ND	U	10	ND	U	10	ND	U	10	320	~	10	ND	U	10	ND	U	10	ND	U	10
WE-6	0-6"	12/21/04	12/27/04	ND	ND	U	44	ND	U	22	ND	U	22	ND	U	22	ND	U	22	ND	U	22	ND	U	22	ND	U	22
WE-6 (0-6")	0-6"	12/22/04	12/27/04	ND	ND	U	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10
WE-7	0-6"	12/21/04	12/27/04	ND	ND	U	36	ND	U	18	ND	U	18	ND	U	18	ND	U	18	ND	U	18	ND	U	18	ND	U	18
WE8-0-6"	0-6"	12/21/04	12/23/04	44	ND	U	41	ND	U	21	ND	U	21	ND	U	21	44	~	21	ND	U	21	ND	U	21	ND	U	21
WE.5-2.5	0-6"	4/25/05	5/2/05	601	ND	U	121	ND	U	61	ND	U	61	ND	U	61	601	~	61	ND	U	61	ND	U	61	ND	U	61
WE.5-3	0-6"	4/25/05	5/2/05	ND	ND	U	221	ND	U	111	ND	U	111	ND	U	111	ND	U	111	ND	U	111	ND	U	111	ND	U	111
Duplicate 220 (WE.5-3)	0-6"	4/25/05	5/2/05	ND	ND	U	147	ND	U	74	ND	U	74	ND	U	74	ND	U	74	ND	U	74	ND	U	74	ND	U	74
WE.5-3.5	0-6"	4/25/05	5/2/05	ND	ND	U	151	ND	U	76	ND	U	76	ND	U	76	ND	U	76	ND	U	76	ND	U	76	ND	U	76
WF-3 (0-6")	0-6"	12/22/04	12/27/04	740	ND	U	20	ND	U	10	ND	U	10	ND	U	10	740	~	10	ND	U	10	ND	U	10	ND	U	10
WF-4 (0-6")	0-6"	12/22/04	12/27/04	640	ND	U	20	ND	U	10	ND	U	10	ND	U	10	640	~	10	ND	U	10	ND	U	10	ND	U	10
WF-5 (0-6")	0-6"	12/22/04	12/27/04	ND	ND	U	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10
WF-6 (0-6")	0-6"	12/22/04	12/27/04	270	ND	U	20	ND	U	10	ND	U	10	ND	U	10	270	~	10	ND	U	10	ND	U	10	ND	U	10
WF-7	0-6"	12/21/04	12/27/04	104	ND	U	42	ND	U	21	ND	U	21	ND	U	21	104	~	21	ND	U	21	ND	U	21	ND	U	21
WF8-0-6"	0-6"	12/21/04	12/23/04	325	ND	U	35	ND	U	18	ND	U	18	ND	U	18	325	~	18	ND	U	18	ND	U	18	ND	U	18
WG-3 (0-6")	0-6"	12/22/04	12/27/04	ND	ND	U	20	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10	ND	U	10
WG-4 (0-6")	0-6"	12/22/04	12/27/04	280	ND	U	20	ND	U	10	ND	U	10	ND	U	10	280	~	10	ND	U	10	ND	U	10	ND	U	10

McCoy Field
Project No. 02685

Table 1
Laboratory Analytical Results - Polychlorinated Biphenyls
Wetlands

				Total PCBs	PCB-1221			PCB-1232			PCB-1016/1242			PCB-1248			PCB-1254			PCB-1260			PCB-1262			PCB-1268		
				(ug/kg)	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL	(ug/kg)	Q	RL
			RCS-1	2,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
			Turnkey Acceptance Limit	50,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
			UCL	100,000	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
Sample Identification	**Depth**	**Collection Date**	**Analysis Date**																									
WG-4.5	0-6"	4/22/05	4/30/05	**1,162**	ND	U	43	ND	U	23	ND	U	23	ND	U	23	870	~	23	292	~	23	ND	U	23	ND	U	23
WG-5 (0-6")	0-6"	12/22/04	1/6/05	ND	ND	U	2,000	ND	U	1,000	ND	U	1,000	ND	U	1,000	ND	U	1000	ND	U	1,000	ND	U	1,000	ND	U	1,000
WG-5 (0-6") MS	0-6"	12/22/04	1/6/05	**5,850**	ND	U	1,960	ND	U	980	ND	U	980	ND	U	980	5,850	~	980	ND	U	980	ND	U	980	ND	U	980
WG-5 (0-6") MSD	0-6"	12/22/04	1/6/05	**4,940**	ND	U	1,960	ND	U	980	ND	U	980	ND	U	980	4,940	~	980	ND	U	980	ND	U	980	ND	U	980
WG-6	0-6"	4/22/05	4/30/05	ND	ND	U	25	ND	U	12	ND	U	12	ND	U	12	ND	U	12	ND	U	12	ND	U	12	ND	U	12
WH-4	0-6"	4/22/05	4/30/05	113	ND	U	59	ND	U	30	ND	U	30	ND	U	30	113	~	30	ND	U	30	ND	U	30	ND	U	30
WH-4.5	0-6"	4/22/05	4/30/05	ND	ND	U	29	ND	U	15	ND	U	15	ND	U	15	ND	U	15	ND	U	15	ND	U	15	ND	U	15
WH-5 (0-6")	0-6"	12/22/04	12/27/04	**3,940**	ND	U	20	ND	U	10	ND	U	10	ND	U	10	3,940	~	10	ND	U	10	ND	U	10	ND	U	10
WH-5.5	0-6"	4/22/05	4/30/05	100	ND	U	52	ND	U	26	ND	U	26	ND	U	26	100	~	26	ND	U	26	ND	U	26	ND	U	26
WH.5-4.5	0-6"	4/22/05	4/30/05	86	ND	U	29	ND	U	14	ND	U	14	ND	U	14	86	U	14	ND	U	14	ND	U	14	ND	U	14
WH.5-5	0-6"	4/22/05	4/30/05	77	ND	U	57	ND	U	28	ND	U	28	ND	U	28	77	~	28	ND	U	28	ND	U	28	ND	U	28
WH.5-5MS	0-6"	4/22/05	4/30/05	647	ND	U	46	ND	U	23	ND	U	23	ND	U	23	647	U	23	ND	U	23	ND	U	23	ND	U	23
WH.5-5MSD	0-6"	4/22/05	4/30/05	788	ND	U	45	ND	U	23	ND	U	23	ND	U	23	788	U	23	ND	U	23	ND	U	23	ND	U	23
WH.5-5.5	0-6"	4/22/05	4/30/05	56	ND	U	34	ND	U	17	ND	U	17	ND	U	17	56	~	17	ND	U	17	ND	U	17	ND	U	17
WH-6	0-6"	4/22/05	4/30/05	ND	ND	U	71	ND	U	35	ND	U	35	ND	U	35	ND	U	35	ND	U	35	ND	U	35	ND	U	35
WI-4	0-6"	4/22/05	4/30/05	240	ND	U	140	ND	U	70	ND	U	70	ND	U	70	240	~	70	ND	U	70	ND	U	70	ND	U	70
WI-5	0-6"	4/22/05	4/30/05	90	ND	U	50	ND	U	25	ND	U	25	ND	U	25	90	~	25	ND	U	25	ND	U	25	ND	U	25
WI-6	0-6"	4/22/05	4/30/05	254	ND	U	78	ND	U	39	ND	U	39	ND	U	39	254	~	39	ND	U	39	ND	U	39	ND	U	39
WI.5-4	0-6"	4/22/05	4/30/05	45	ND	U	47	ND	U	23	ND	U	23	ND	U	23	45	~	23	ND	U	23	ND	U	23	ND	U	23
WI.5-4.5	0-6"	4/22/05	4/30/05	85	ND	U	89	ND	U	45	ND	U	45	ND	U	45	85	~	45	ND	U	45	ND	U	45	ND	U	45
WI.5-5	0-6"	4/22/05	4/30/05	**1,123**	ND	U	119	ND	U	59	ND	U	59	ND	U	59	1,123	~	59	ND	U	59	ND	U	59	ND	U	59
Duplicate 221 (WI.5-5)	0-6"	4/22/05	4/30/05	458	ND	U	96	ND	U	48	ND	U	48	ND	U	48	458	~	48	ND	U	48	ND	U	48	ND	U	48
WI.5-5.5	0-6"	4/22/05	4/30/05	74	ND	U	84	ND	U	42	ND	U	42	ND	U	42	74	~	42	ND	U	42	ND	U	42	ND	U	42

NOTES:
ND = not detected above method detection limit
RCS-1 = Massachusetts Contingency Plan Method 1 Soil Standard for category S-1 soil.
Gray shading indicates concentration exceeding the cleanup level of 1 ppm.

Table 2

Laboratory Analytical Results – RCRA 8 Metals and Total Organic Carbon

McCoy Field
Project No. 02685

Table 2
Laboratory Analytical Results - RCRA 8 Metals and Total Organic Carbon
Wetlands

			RCRA 8 Metals														TCLP	
			Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Selenium		Silver		Lead	TOC
			(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/L)	(%)
		RCS-1	30	30	1,000	1,000	30	30	1,000	1,000	300	300	20	20	400	400	100	100	~	~
		MADEP Background	20	20	50	50	3	3	40	40	600	600	1	1	1	1	5	5	~	5
		Toxicity Characteristic (20 Times) Rule	100	100	2,000	2,000	20	20	100	100	100	100	4	4	20	20	100	100	~	100
		Regulatory Limit	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	5.0	~
		UCL	300	300	10,000	10,000	800	800	10,000	10,000	6,000	6,000	600	600	10,000	10,000	2,000	2,000	~	2,000
Sample Identification	**Depth**	**Date**																		
IW1-0-6"	0-6"	12/23/04	1.81	0.12	19	0.06	0.81	0.06	7.14	0.06	44	0.06	0.063	0.012	ND	0.12	ND	0.06	~	7.37
IW2-0-6"	0-6"	12/23/04	6.38	0.15	584	0.38	3.77	0.08	57	0.08	**560**	0.38	0.835	0.150	ND	0.15	0.38	0.08	0.2	11.49
WA3-0-6"	0-6"	12/21/04	1.09	0.14	23	0.07	1.04	0.07	13	0.07	198	0.07	0.037	0.007	ND	0.14	ND	0.07	1.8	2.9
Duplicate 201 (WA3-0-6")	0-6"	12/21/04	1.04	0.13	28	0.06	1.05	0.06	16	0.06	**374**	0.06	0.057	0.007	ND	0.13	ND	0.06	2.1	3.1
WB4-0-6"	0-6"	12/21/04	0.27	0.22	55	0.11	1.76	0.11	38	0.11	134	0.11	0.094	0.012	ND	0.22	0.11	0.11	0.21	12
WB5-0-6"	0-6"	12/21/04	0.58	0.32	62	0.16	2.05	0.16	42	0.16	127	0.16	0.096	0.016	ND	0.32	ND	0.16	0.17	12.6
WB6-0-6"	0-6"	12/21/04	ND	0.64	99	0.32	1.8	0.32	18	0.32	170	0.32	0.136	0.032	ND	0.64	ND	0.32	<0.1	38
WB7-0-6"	0-6"	12/21/04	1.11	0.62	40	0.31	0.98	0.31	11	0.31	**502**	0.31	0.235	0.029	0.86	0.62	0.37	0.31	<0.1	57.1
WC-4	0-6"	12/21/04	0.71	0.50	88	0.25	1.56	0.25	17	0.25	178	0.25	0.181	0.025	0.96	0.50	ND	0.25	<0.1	45.2
WC-5	0-6"	12/21/04	ND	0.54	62	0.27	0.98	0.27	11	0.27	50	0.27	0.079	0.031	2.18	0.54	ND	0.27	~	58.6
WC-6	0-6"	12/21/04	ND	0.50	99	0.25	1.58	0.25	3.37	0.25	18	0.25	0.065	0.026	ND	0.50	ND	0.25	~	51
WC7-0-6"	0-6"	12/21/04	ND	0.47	102	0.23	1.31	0.23	12	0.23	184	0.23	0.128	0.023	ND	0.47	ND	0.23	<0.1	37.6
WC8-0-6"	0-6"	12/21/04	ND	0.62	73	0.31	1.11	0.31	9.84	0.31	112	0.31	0.197	0.032	ND	0.62	ND	0.31	<0.1	54.6
WC18-0-6"	0-6"	12/23/04	0.94	0.12	9.27	0.06	0.78	0.06	5.26	0.06	19	0.06	0.029	0.012	ND	0.12	ND	0.06	~	3.45
WC19-0-6"	0-6"	12/23/04	1.37	0.16	23	0.08	0.68	0.08	6.95	0.08	47	0.08	0.062	0.016	ND	0.16	ND	0.08	~	3.97
WC20-0-6"	0-6"	12/23/04	2.38	0.18	23	0.09	0.66	0.09	5.14	0.09	43	0.09	0.06	0.018	ND	0.18	ND	0.09	~	14.75
WC21-0-6"	0-6"	12/23/04	1.17	0.15	12	0.08	0.65	0.08	3.26	0.08	16	0.08	0.058	0.016	ND	0.15	ND	0.08	~	15.1
WC22-0-6"	0-6"	12/23/04	1.23	0.14	13	0.07	0.46	0.07	4.62	0.07	28	0.07	0.067	0.013	ND	0.14	ND	0.07	~	5.92
WC23-0-6"	0-6"	12/23/04	1.91	0.15	16	0.08	0.6	0.08	7.96	0.08	36	0.08	0.096	0.015	0.74	0.15	ND	0.08	~	16.23
WC24-0-6"	0-6"	12/23/04	0.65	0.11	10	0.06	0.26	0.06	3.42	0.06	9.42	0.06	0.025	0.012	ND	0.11	ND	0.06	~	6.15
WC25-0-6"	0-6"	12/23/04	2.25	0.14	49	0.07	0.78	0.07	10	0.07	54	0.07	0.111	0.016	ND	0.14	ND	0.07	~	13.28
WC26-0-6"	0-6"	12/23/04	1.94	0.19	163	0.09	1.64	0.09	25	0.09	119	0.09	0.055	0.018	ND	0.19	ND	0.09	<0.1	4.94
WC27-0-6"	0-6"	12/23/04	1.94	0.12	109	0.06	1.24	0.06	16	0.06	120	0.06	0.033	0.014	0.2	0.12	ND	0.06	<0.1	6.69
WC.5-4.5	0-6"	4/22/05	ND	0.75	44	0.38	0.53	0.38	5.94	0.38	20	0.38	ND	0.081	1.73	0.75	ND	0.38	~	~
WC.5-5.5	0-6"	4/22/05	ND	0.52	52	0.26	0.83	0.26	5.67	0.26	43	0.26	0.11	0.051	1.08	0.52	ND	0.26	~	~
WC.5-6.5	0-6"	4/22/05	ND	0.68	62	0.34	0.75	0.34	5.94	0.34	14	0.34	0.083	0.078	2.12	0.68	ND	0.34	~	~
WC.5-8.5	0-6"	4/22/05	ND	0.60	48	0.30	0.66	0.30	5.89	0.30	27	0.30	0.078	0.062	2.34	0.60	ND	0.30	~	~
WC.5-9.5	0-6"	4/22/05	ND	0.69	78	0.35	0.76	0.35	7.12	0.35	23	0.35	0.075	0.067	2.21	0.69	ND	0.35	~	~
WC.5-10.5	0-6"	4/20/05	ND	0.62	80	0.31	1.18	0.31	6.27	0.31	63	0.31	0.088	0.059	1.86	0.62	ND	0.31	~	~
WC.5-11.5	0-6"	4/20/05	ND	0.38	44	0.19	0.45	0.19	6.01	0.19	15	0.19	0.056	0.038	3.61	0.38	ND	0.19	~	~
WC.5-12.5	0-6"	4/20/05	0.83	0.46	78	0.23	0.78	0.23	16	0.23	26	0.23	0.117	0.050	4.04	0.46	ND	0.23	~	~
WC.5-13.5	0-6"	4/20/05	ND	0.46	86	0.23	1.15	0.23	12	0.23	55	0.23	0.114	0.043	2.89	0.46	ND	0.23	~	~
Duplicate 222 (WC.5-13.5)	0-6"	4/20/05	1.42	0.39	47	0.20	0.71	0.20	36	0.20	19	0.20	0.121	0.038	3.78	0.39	ND	0.20	~	~
WC.5-14.5	0-6"	4/20/05	5.27	0.27	275	0.13	4.73	0.13	26	0.13	**524**	0.13	0.457	0.027	0.38	0.27	0.40	0.13	~	~
WC.5-14.5MS	0-6"	4/20/05	23	0.25	121	0.12	22	0.12	33	0.12	156	0.12	0.198	0.109	21	0.25	20	0.12	~	~
WC.5-14.5MSD	0-6"	4/20/05	18	0.24	45	0.12	18	0.12	34	0.12	25	0.12	0.092	0.023	17	0.24	16	0.12	~	~
WC.5-15.5	0-6"	4/20/05	0.82	0.32	35	0.16	0.70	0.16	26	0.16	13	0.16	0.039	0.025	ND	0.32	ND	0.16	~	~
WC.5-16.5	0-6"	4/20/05	ND	0.10	5.20	0.05	0.22	0.05	3.90	0.05	1.70	0.05	ND	0.011	ND	0.10	ND	0.05	~	~
WC.5-17.14	0-6"	4/20/05	1.70	0.41	0.28	0.21	0.71	0.21	34	0.21	12	0.21	0.091	0.037	1.08	0.41	ND	0.21	~	~
WC.5-17.28	0-6"	4/20/05	ND	0.40	30	0.20	0.96	0.20	20	0.20	14	0.20	0.238	0.038	ND	0.40	ND	0.20	~	~
WC.5-18.5	0-6"	4/25/05	0.38	0.13	6.59	0.07	0.29	0.07	3.71	0.07	7.41	0.07	0.026	0.014	ND	0.13	ND	0.07	~	~

McCoy Field
Project No. 02685

Table 2
Laboratory Analytical Results - RCRA 8 Metals and Total Organic Carbon
Wetlands

			RCRA 8 Metals														TCLP	
			Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Selenium		Silver		Lead	TOC
			(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/L)	(%)
RCS-1			**30**	**30**	**1,000**	**1,000**	**30**	**30**	**1,000**	**1,000**	**300**	**300**	**20**	**20**	**400**	**400**	**100**	**100**	**~**	**~**
MADEP Background			**20**	**20**	**50**	**50**	**3**	**3**	**40**	**40**	**600**	**600**	**1**	**1**	**1**	**1**	**5**	**5**	**~**	**5**
Toxicity Characteristic (20 Times) Rule			**100**	**100**	**2,000**	**2,000**	**20**	**20**	**100**	**100**	**100**	**100**	**4**	**4**	**20**	**20**	**100**	**100**	**~**	**100**
Regulatory Limit			**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**5.0**	**~**
UCL			**300**	**300**	**10,000**	**10,000**	**800**	**800**	**10,000**	**10,000**	**6,000**	**6,000**	**600**	**600**	**10,000**	**10,000**	**2,000**	**2,000**	**~**	**2,000**
Sample Identification	**Depth**	**Date**																		
WC.5-19.5	0-6"	4/25/05	1.03	0.10	9.30	0.05	0.6	0.05	5.97	0.05	4.22	0.05	ND	0.010	ND	0.10	ND	0.05	~	~
WC.5-20.5	0-6"	4/25/05	0.78	0.13	9.31	0.07	0.31	0.07	4.16	0.07	7.10	0.07	0.022	0.014	ND	0.13	ND	0.07	~	~
WC.5-21.5	0-6"	4/25/05	0.96	0.15	23	0.07	0.41	0.07	4.94	0.07	18	0.07	0.101	0.015	0.24	0.15	ND	0.07	~	~
WC.5-22.5	0-6"	4/25/05	1.08	0.15	13	0.08	0.63	0.08	8.38	0.08	34	0.08	0.056	0.061	ND	0.15	ND	0.08	~	~
WC.5-23.5	0-6"	4/25/05	2.60	0.16	20	0.08	0.80	0.08	8.39	0.08	46	0.08	0.078	0.016	0.30	0.16	ND	0.08	~	~
WC.5-24.5	0-6"	4/25/05	1.03	0.18	25	0.09	0.65	0.09	7.90	0.09	57	0.09	0.128	0.021	0.45	0.18	0.11	0.09	~	~
Duplicate 223 (WC.5-24.5)	0-6"	4/25/05	2.12	0.54	69	0.27	1.03	0.27	9.46	0.27	53	0.27	0.113	0.026	2.12	0.54	0.27	0.27	~	~
WC.5-25.5	0-6"	4/25/05	0.96	0.15	11	0.08	0.31	0.08	5.41	0.08	17	0.08	0.046	0.016	0.43	0.15	ND	0.08	~	~
WC.5-26.5	0-6"	4/25/05	0.84	0.17	23	0.08	0.69	0.08	11	0.08	41	0.08	0.073	0.017	0.25	0.17	ND	0.08	~	~
WC.5-27.5	0-6"	4/25/05	1.91	0.13	83	0.06	0.91	0.06	18	0.06	107	0.06	2.06	0.130	ND	0.13	0.11	0.06	0.3	~
WD-3 (0-6")	0-6"	12/22/04	ND	0.19	28	0.09	0.36	0.09	3.71	0.09	23	0.09	0.06	0.019	0.83	0.19	ND	0.09	~	23
WD-4 (0-6")	0-6"	12/22/04	ND	0.45	83	0.22	1.38	0.22	15	0.22	64	0.22	0.123	0.047	ND	0.45	ND	0.22	~	54.4
WD-4.5	0-6"	4/22/05	0.76	0.54	55	0.27	0.6	0.27	9.19	0.27	27	0.27	0.093	0.054	2.50	0.54	ND	0.27	~	~
WD-5 (0-6")	0-6"	12/22/04	1.75	0.20	35	0.10	1.1	0.10	7.2	0.10	61	0.10	0.103	0.019	ND	0.20	ND	0.10	~	11.7
Duplicate 202 (WD5-0-6")	0-6"	12/22/04	1.43	0.15	34	0.08	0.83	0.08	7.55	0.08	61	0.08	0.091	0.017	ND	0.15	ND	0.08	~	9.41
WD-6 (0-6")	0-6"	12/22/04	ND	0.31	82	0.16	1.15	0.16	7.48	0.16	128	0.16	0.177	0.034	ND	0.31	ND	0.16	<0.1	32.2
WD-6.5	0-6"	4/22/05	ND	0.63	68	0.31	1.07	0.31	4.64	0.31	36	0.31	0.077	0.055	1.57	0.63	ND	0.31	~	~
WD-7	0-6"	12/21/04	0.6	0.34	104	0.17	2.62	0.17	26	0.17	**477**	0.17	0.245	0.016	ND	0.34	ND	0.17	0.1	24
WD8-0-6"	0-6"	12/21/04	ND	0.51	150	0.25	2.44	0.25	16	0.25	162	0.25	0.155	0.026	ND	0.51	ND	0.25	<0.1	39.9
WD-9 (0-6")	0-6"	12/22/04	ND	0.39	77	0.20	0.86	0.20	4.26	0.20	33	0.20	0.117	0.038	0.78	0.39	ND	0.20	~	58.7
WD-10 (0-6")	0-6"	12/22/04	ND	0.36	223	0.18	0.79	0.18	3.07	0.18	25	0.18	0.91	0.036	ND	0.36	ND	0.18	~	33.4
WD-10.5	0-6"	4/20/05	0.67	0.48	25	0.24	0.29	0.24	7.17	0.24	4.16	0.24	0.077	0.048	1.43	0.48	ND	0.24	~	~
WD-11 (0-6")	0-6"	12/22/04	ND	0.42	109	0.21	1.18	0.21	12	0.21	112	0.21	0.201	0.042	ND	0.42	ND	0.21	<0.1	46.9
WD-12 (0-6")	0-6"	12/22/04	ND	0.44	138	0.22	1.9	0.22	15	0.22	**386**	0.22	0.293	0.047	1.32	0.44	0.31	0.22	<0.1	41.9
WD-13 (0-6")	0-6"	12/22/04	ND	0.41	156	0.21	1.23	0.21	6.37	0.21	59	0.21	0.141	0.041	1.19	0.41	ND	0.21	~	48.9
WD-14 (0-6")	0-6"	12/22/04	5.23	0.54	136	0.27	1.46	0.27	70	0.27	81	0.27	0.339	0.058	3.62	0.54	ND	0.27	~	41
WD-15 (0-6")	0-6"	12/22/04	ND	0.37	147	0.18	1.86	0.18	13	0.18	144	0.18	0.218	0.037	ND	0.37	ND	0.18	<0.1	43.9
WD-15.5	0-6"	4/20/05	0.25	0.12	14	0.06	0.20	0.06	8.80	0.06	4.41	0.06	0.035	0.013	ND	0.12	ND	0.06	~	~
WD-16 (0-6")	0-6"	12/22/04	2.93	0.31	77	0.16	0.81	0.16	40	0.16	47	0.16	0.164	0.035	1.97	0.31	ND	0.16	~	29.2
WD-17 (0-6")	0-6"	12/22/04	0.68	0.32	84	0.16	1.26	0.16	19	0.16	107	0.16	0.145	0.032	ND	0.32	ND	0.16	<0.1	46.9
WD-17.57	0-6"	4/20/05	6.57	0.80	63	0.40	0.48	0.40	70	0.40	22	0.40	0.111	0.017	ND	0.80	ND	0.40	~	~
WD-17.46	0-6"	4/20/05	1.05	0.35	89	0.18	1.05	0.18	13	0.18	97	0.18	0.072	0.037	1.16	0.35	ND	0.18	~	~
WD18-0-6"	0-6"	12/23/04	1.61	0.17	36	0.08	0.79	0.08	8.8	0.08	70	0.08	0.115	0.017	ND	0.17	ND	0.18	~	17.56
WD19-0-6"	0-6"	12/23/04	1.15	0.17	69	0.09	1.03	0.09	16	0.09	93	0.09	0.136	0.074	ND	0.17	0.09	0.09	~	13.7
WD20-0-6"	0-6"	12/23/04	0.17	0.11	11	0.05	0.4	0.05	6.76	0.05	6.14	0.05	0.015	0.013	ND	0.11	ND	0.05	~	2.3
WD21-0-6"	0-6"	12/23/04	1.26	0.25	70	0.13	0.65	0.13	8.12	0.13	93	0.13	0.221	0.026	ND	0.25	ND	0.13	~	17.09
WD21-0-6" MS	0-6"	12/23/04	~		~		~		~		~		~		~		~		~	~
WD21-0-6" MSD	0-6"	12/23/04	~		~		~		~		~		~		~		~		~	~
WD22-0-6"	0-6"	12/23/04	0.74	0.12	26	0.06	0.51	0.06	6.99	0.06	50	0.06	0.072	0.012	ND	0.12	ND	0.06	~	7.48
WD23-0-6"	0-6"	12/23/04	3.85	0.17	278	0.09	3.04	0.09	51	0.09	**325**	0.09	0.507	0.161	ND	0.17	0.28	0.09	0.2	8.53

Table 2
Laboratory Analytical Results - RCRA 8 Metals and Total Organic Carbon
Wetlands

			RCRA 8 Metals														TCLP	
			Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Selenium		Silver		Lead	TOC
			(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/kg)	RL	(mg/L)	(%)
RCS-1			**30**	**30**	**1,000**	**1,000**	**30**	**30**	**1,000**	**1,000**	**300**	**300**	**20**	**20**	**400**	**400**	**100**	**100**	**~**	**~**
MADEP Background			**20**	**20**	**50**	**50**	**3**	**3**	**40**	**40**	**600**	**600**	**1**	**1**	**1**	**1**	**5**	**5**	**~**	**5**
Toxicity Characteristic (20 Times) Rule			**100**	**100**	**2,000**	**2,000**	**20**	**20**	**100**	**100**	**100**	**100**	**4**	**4**	**20**	**20**	**100**	**100**	**~**	**100**
Regulatory Limit			**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**5.0**	**~**
UCL			**300**	**300**	**10,000**	**10,000**	**800**	**800**	**10,000**	**10,000**	**6,000**	**6,000**	**600**	**600**	**10,000**	**10,000**	**2,000**	**2,000**	**~**	**2,000**
Sample Identification	**Depth**	**Date**																		
WD24-0-6"	0-6"	12/23/04	3.18	0.32	344	0.16	2.11	0.16	26	0.16	264	0.16	0.341	0.012	2.46	0.32	ND	0.16	<0.1	30.27
WD25-0-6"	0-6"	12/23/04	6.9	0.25	966	0.63	4.3	0.13	79	0.13	**810**	0.63	0.648	0.236	ND	0.25	0.5	0.13	0.2	13.14
WD26-0-6"	0-6"	12/23/04	0.98	0.15	13	0.07	0.37	0.07	4.59	0.07	7.34	0.07	0.164	0.057	ND	0.15	ND	0.07	~	9.36

Table 3

Laboratory Analytical Results – Polynuclear Aromatic Hydrocarbons

McCoy Field
Project No. 02685

Table 3
Laboratory Analytical Results - Polynuclear Aromatic Hydrocarbons
Wetlands

			Naphthalene		2-Methylnaphthalene		Acenaphthylene		Acenaphthene		Fluorene		Phenanthrene		Anthracene		Fluoranthene		Pyrene		Benzo(a)anthracene		Chrysene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Benzo(a)pyrene		Ideno(1,2,3-cd)pyrene		Dibenz(a,h)anthracene		Benzo(g,h,i)perylene	
			(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL
	RCS-1		50,000	50,000	500,000	500,000	60,000	60,000	1,000,000	1,000,000	700	700	700	700	100,000	100,000	2,000	2,000	100,000	100,000	500,000	500,000	700	700	50,000	50,000	50,000	50,000	6,000	6,000	50,000	50,000	100,000	100,000	100,000	100,000
	MADEP Background		~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
	UCL		~	~	~	~	10,000,000	10,000,000	~	~	7,000	7,000	10,000,000	10,000,000	5,000,000	5,000,000	2,000,000	2,000,000	5,000,000	5,000,000	~	~	90,000	90,000	~	~	~	~	500,000	500,000	~	~	~	~	~	~
Sample Identification	**Depth**	**Date**																																		
IW1-0-6"	0-6"	12/23/04	ND	88	ND	88	ND	88	110		89		**1,400**		250		**2,200**		1,600		920		**8,800**		1,400		450		930		550		ND	88	490	490
IW2-0-6"	0-6"	12/23/04	ND	110	ND	110	ND	110	140		140		**1,900**		440		**3,000**		ND	110	1,400		**1,000**		2,300		560		1,400		780		ND	110	820	820
WA3-0-6"	0-6"	12/21/04	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69	ND	69
Duplicate 201 (WA3-0-6")	0-6"	12/21/04	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71	ND	71
WB4-0-6"	0-6"	12/21/04	ND	120	ND	120	ND	120	ND	120	ND	120	**1,000**		ND	120	**2,200**		1,500		750		**810**		ND	120	ND	120	ND	120	ND	120	ND	120	ND	120
WB5-0-6"	0-6"	12/21/04	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	470		350		ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180
WB6-0-6"	0-6"	12/21/04	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330
WB7-0-6"	0-6"	12/21/04	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310
WC-4	0-6"	12/21/04	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	260		ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260
WC-5	0-6"	12/21/04	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310
WC-6	0-6"	12/21/04	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260
WC7-0-6"	0-6"	12/21/04	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230
WC8-0-6"	0-6"	12/21/04	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360
WC18-0-6"	0-6"	12/23/04	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79	ND	79
WC19-0-6"	0-6"	12/23/04	ND	92	ND	92	ND	92	ND	92	ND	92	95		ND	92	180		170		100		110		160		ND	92	110		ND	92	ND	92	ND	92
WC20-0-6"	0-6"	12/23/04	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130
WC21-0-6"	0-6"	12/23/04	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110
WC22-0-6"	0-6"	12/23/04	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	120		140		ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84
WC23-0-6"	0-6"	12/23/04	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	110		120		ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110
WC24-0-6"	0-6"	12/23/04	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84	ND	84
WC25-0-6"	0-6"	12/23/04	ND	110	ND	110	ND	110	ND	110	ND	110	130		ND	110	220		230		ND	110	110		ND	110	ND	110	ND	110	ND	110	ND	110	ND	110
WC26-0-6"	0-6"	12/23/04	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130
WC27-0-6"	0-6"	12/23/04	ND	130	ND	130	ND	130	ND	130	ND	130	140		ND	130	260		240		ND	130	140		ND	130	ND	130	ND	130	ND	130	ND	130	ND	130
WC.5-4.5	0-6"	4/22/05	ND	4,100	ND	4,100	ND	4,100	ND	4,100	ND	**4,100**	ND	**4,100**	ND	4,100	ND	**4,100**	ND	4,100	ND	4,100	ND	**4,100**	ND	4,100	ND	4,100	ND	4,100	ND	4,100	ND	4,100	ND	4,100
WC.5-5.5	0-6"	4/22/05	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510
WC.5-6.5	0-6"	4/22/05	ND	840	ND	840	ND	840	ND	840	ND	**840**	ND	**840**	ND	840	ND	840	ND	840	ND	840	ND	**840**	ND	840	ND	840	ND	840	ND	840	ND	840	ND	840
WC.5-8.5	0-6"	4/22/05	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650	ND	650
WC.5-9.5	0-6"	4/22/05	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600	ND	600
WC.5-10.5	0-6"	4/20/05	ND	700	ND	700	ND	700	ND	700	ND	**700**	ND	**700**	ND	700	ND	700	ND	700	ND	700	ND	**700**	ND	700	ND	700	ND	700	ND	700	ND	700	ND	700
WC.5-11.5	0-6"	4/20/05	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440
WC.5-12.5	0-6"	4/20/05	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540	ND	540
WC.5-13.5	0-6"	4/20/05	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470	ND	470
Duplicate 222 (WC.5-13.5)	0-6"	4/20/05	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440
WC.5-14.5	0-6"	4/20/05	ND	140	ND	140	ND	140	ND	140	ND	140	**2,200**		540		1,800		4,200		1,400		**1,200**		1,500		740		1,400		1,100		ND	140	1,100	
WC.5-15.5	0-6"	4/20/05	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340
WC.5-16.5	0-6"	4/20/05	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130
WC.5-17.14	0-6"	4/20/05	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430
WC.5-17.28	0-6"	4/20/05	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	760		1,500		540		540		770		490		680		ND	440	ND	440	ND	440
WC.5-18.5	0-6"	4/25/05	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140
WC.5-19.5	0-6"	4/25/05	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56	ND	56
WC.5-20.5	0-6"	4/25/05	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160
WC.5-21.5	0-6"	4/25/05	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95	ND	95
WC.5-22.5	0-6"	4/25/05	ND	88	ND	88	ND	88	ND	88	ND	88	ND	88	ND	88	110		170		ND	88	ND	88	120		ND	88	ND	88	ND	88	ND	88	ND	88
WC.5-23.5	0-6"	4/25/05	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190	ND	190
WC.5-24.5	0-6"	4/25/05	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	400		ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300
Duplicate 223 (WC.5-24.5)	0-6"	4/25/05	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340
WC.5-25.5	0-6"	4/25/05	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170
WC.5-26.5	0-6"	4/25/05	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
WC.5-27.5	0-6"	4/25/05	ND	150	ND	150	ND	150	ND	150	ND	150	160		ND	150	310		420		180		160		380		180		250		ND	150	ND	150	ND	150
WD-3 (0-6")	0-6"	12/22/04	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130
WD-4 (0-6")	0-6"	12/22/04	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340
WD-4.5	0-6"	4/22/05	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570
WD-5 (0-6")	0-6"	12/22/04	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140
Duplicate 202 (WD5-0-6")	0-6"	12/22/04	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120	ND	120
WD-6 (0-6")	0-6"	12/22/04	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220
WD-6.5	0-6"	4/22/05	ND	3,500	ND	3,500	ND	3,500	ND	3,500	ND	**3,500**	ND	**3,500**	ND	3,500	ND	**3,500**	ND	3,500	ND	3,500	ND	**3,500**	ND	3,500	ND	3,500	ND	3,500	ND	3,500	ND	3,500	ND	3,500
WD-7	0-6"	12/21/04	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	190		190		ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170
WD8-0-6"	0-6"	12/21/04	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270
WD-9 (0-6")	0-6"	12/22/04	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280
WD-10 (0-6")	0-6"	12/22/04	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240
WD-10.5	0-6"	4/20/05	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50
WD-11 (0-6")	0-6"	12/22/04	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310	ND	310
WD-12 (0-6")	0-6"	12/22/04	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330
WD-13 (0-6")	0-6"	12/22/04	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300
WD-14 (0-6")	0-6"	12/22/04	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390	ND	390
WD-15 (0-6")	0-6"	12/22/04	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260
WD-15.5	0-6"	4/20/05	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50	ND	50
WD-16 (0-6")	0-6"	12/22/04	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230	ND	230
WD-17 (0-6")	0-6"	12/22/04	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220
WD-17.57	0-6"	4/20/05	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170
WD-17.46	0-6"	4/20/05	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	590		ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360
WD18-0-6"	0-6"	12/23/04	ND	110	ND	110	ND	110	ND	110	ND	110	180		ND	110	260		260		150		130		ND	110	ND	110	ND	110	ND	110	ND	110	ND	110
WD19-0-6"	0-6"	12/23/04	ND	130	ND	130	ND	130	ND	130	ND	130	180		ND	130	310		430		180		190		460		130		330		ND	130	ND	130	ND	130
WD20-0-6"	0-6"	12/23/04	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87	ND	87

McCoy Field
Project No. 02685

Table 3
Laboratory Analytical Results - Polynuclear Aromatic Hydrocarbons
Wetlands

			Naphthalene		2-Methylnaphthalene		Acenaphthylene		Acenaphthene		Fluorene		Phenanthrene		Anthracene		Fluoranthene		Pyrene		Benzo(a)anthracene		Chrysene		Benzo(b)fluoranthene		Benzo(k)fluoranthene		Benzo(a)pyrene		Ideno(1,2,3-cd)pyrene		Dibenz(a,h)anthracene		Benzo(g,h,i)perylene	
			(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL
	RCS-1		50,000	50,000	500,000	500,000	60,000	60,000	1,000,000	1,000,000	700	700	700	700	100,000	100,000	2,000	2,000	100,000	100,000	500,000	500,000	700	700	50,000	50,000	50,000	50,000	6,000	6,000	50,000	50,000	100,000	100,000	100,000	100,000
	MADEP Background		~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
	UCL		~	~	~	~	10,000,000	10,000,000	~	~	7,000	7,000	10,000,000	10,000,000	5,000,000	5,000,000	2,000,000	2,000,000	5,000,000	5,000,000	~	~	90,000	90,000	~	~	~	~	500,000	500,000	~	~	~	~	~	~
Sample Identification	**Depth**	**Date**																																		
WD21-0-6"	0-6"	12/23/04	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	260		250		ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170	ND	170
WD22-0-6"	0-6"	12/23/04	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91	ND	91
WD23-0-6"	0-6"	12/23/04	ND	120	ND	120	ND	120	ND	120	ND	120	470		ND	120	690		760		360		300		490		200		380	380	ND	120	ND	120	ND	120
WD24-0-6"	0-6"	12/23/04	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82	ND	82
WD25-0-6"	0-6"	12/23/04	ND	180	ND	180	ND	180	ND	180	ND	180	220		ND	180	380		460		210		180		310		ND	180	ND	180	ND	180	ND	180	ND	180
WD26-0-6"	0-6"	12/23/04	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	140		130		ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110
Duplicate 203 (WD26-0-6")	0-6"	12/23/04	ND	140	ND	140	ND	140	ND	140	ND	140	490		ND	140	690		640		350		290		440		160		350		ND	140	ND	140	ND	140
WD27-0-6"	0-6"	12/23/04	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	150		180		ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130
WD.5-2.5	0-6"	4/25/05	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	170		190		ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160
WD.5-3	0-6"	4/25/05	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160
WD.5-3.5	0-6"	4/25/05	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610	ND	610
WD.5-4.5	0-6"	4/22/05	ND	790	ND	790	ND	790	ND	790	ND	**790**	ND	**790**	ND	790	ND	790	ND	790	ND	790	ND	**790**	ND	790	ND	790	ND	790	ND	790	ND	790	ND	790
WD.5-5.5	0-6"	4/22/05	ND	730	ND	730	ND	730	ND	730	ND	**730**	ND	**730**	ND	730	ND	730	ND	730	ND	730	ND	**730**	ND	730	ND	730	ND	730	ND	730	ND	730	ND	730
WD.5-6.5	0-6"	4/22/05	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570	ND	570
WD.5-17.14	0-6"	4/20/05	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	330		ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300
WD.5-17.28	0-6"	4/20/05	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200	ND	200
WD.5-17.46	0-6"	4/20/05	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320	ND	320
WD.5-17.57	0-6"	4/20/05	ND	240	ND	240	ND	240	ND	240	ND	240	**2,600**		740		**3,600**		5,600		2,300		**1,800**		2,900		1,400		2,300		ND	240	ND	240	700	
WE-2.5	0-6"	4/25/05	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	190		ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160	ND	160
WE-3 (0-6")	0-6"	12/22/04	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370	ND	370
WE-3.5	0-6"	4/25/05	ND	780	ND	780	ND	780	ND	780	ND	**780**	ND	**780**	ND	780	ND	780	ND	780	ND	780	ND	**780**	ND	780	ND	780	ND	780	ND	780	ND	780	ND	780
WE-4 (0-6")	0-6"	12/22/04	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500
WE-5 (0-6")	0-6"	12/22/04	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330	ND	330
WE-6	0-6"	12/21/04	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270	ND	270
WE-6 (0-6")	0-6"	12/22/04	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510
WE-7	0-6"	12/21/04	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220
WE8-0-6"	0-6"	12/21/04	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260
WE.5-2.5	0-6"	4/25/05	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510	ND	510
WE.5-3	0-6"	4/25/05	ND	1,100	ND	1,100	ND	1,100	ND	1,100	ND	**1,100**	ND	**1,100**	ND	1,100	ND	1,100	ND	1,100	ND	1,100	ND	**1,100**	ND	1,100	ND	1,100	ND	1,100	ND	1,100	ND	1,100	ND	1,100
Duplicate 220 (WE.5-3)	0-6"	4/25/05	ND	760	ND	760	ND	760	ND	760	ND	**760**	ND	**760**	ND	760	ND	760	ND	760	ND	760	ND	**760**	ND	760	ND	760	ND	760	ND	760	ND	760	ND	760
WE.5-3.5	0-6"	4/25/05	ND	930	ND	930	ND	930	ND	930	ND	**930**	ND	**930**	ND	930	ND	930	ND	930	ND	930	ND	**930**	ND	930	ND	930	ND	930	ND	930	ND	930	ND	930
WF-3 (0-6")	0-6"	12/22/04	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340
WF-4 (0-6")	0-6"	12/22/04	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340	ND	340
WF-5 (0-6")	0-6"	12/22/04	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360
WF-6 (0-6")	0-6"	12/22/04	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440	ND	440
WF-7	0-6"	12/21/04	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260	ND	260
WF8-0-6"	0-6"	12/21/04	ND	210	ND	210	ND	210	ND	210	ND	210	**700**		ND	210	1,000		1,200		510		390		540		210		430		ND	210	ND	210	ND	210
WG-3 (0-6")	0-6"	12/22/04	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300	ND	300
WG-4 (0-6")	0-6"	12/22/04	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360	ND	360
WG-4.5	0-6"	4/22/05	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180	ND	180
WG-5 (0-6")	0-6"	12/22/04	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140
WG-6	0-6"	4/22/05	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140	ND	140
WH-4	0-6"	4/22/05	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240
WH-4.5	0-6"	4/22/05	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130	ND	130
WH-5 (0-6")	0-6"	12/22/04	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220	ND	220
WH-5.5	0-6"	4/22/05	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240
WH-6	0-6"	4/22/05	ND	1,800	ND	1,800	ND	1,800	ND	1,800	ND	**1,800**	ND	**1,800**	ND	1,800	ND	1,800	ND	1,800	ND	1,800	ND	**1,800**	ND	1,800	ND	1,800	ND	1,800	ND	1,800	ND	1,800	ND	1,800
WH.5-4.5	0-6"	4/22/05	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110	ND	110
WH.5-5	0-6"	4/22/05	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280	ND	280
WH.5-5.5	0-6"	4/22/05																																		
WI-4	0-6"	4/22/05	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620	ND	620
WI-5	0-6"	4/22/05	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250	ND	250
WI-6	0-6"	4/22/05	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430	ND	430
WI.5-4	0-6"	4/22/05	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240	ND	240
WI.5-4.5	0-6"	4/22/05	ND	2,300	ND	2,300	ND	2,300	ND	2,300	ND	**2,300**	ND	**2,300**	ND	2,300	ND	**2,300**	ND	2,300	ND	2,300	ND	**2,300**	ND	2,300	ND	2,300	ND	2,300	ND	2,300	ND	2,300	ND	2,300
WI.5-5	0-6"	4/22/05	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530	ND	530
Duplicate 221 (WI.5-5)	0-6"	4/22/05	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	810		ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500	ND	500
WI.5-5.5	0-6"	4/22/05	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480	ND	480

NOTES:
ND = not detected above method detection limit
RCS-1 = Massachusetts Contingency Plan Method 1 Soil
Gray shading indicates concentration exceeding the

Table 4

Laboratory Analytical Results – Pesticides

McCoy Field
Project No. 02685

Table 4
Laboratory Analytical Results - Pesticides
Wetlands

			Aldrin		alpha-BHC		beta-BHC		delta-BHC		gamma-BHC		alpha-Chlordane		gamma-Chlordane		Chlordane	
			(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL
		RCS-1	50,000	50,000	500,000	500,000	60,000	60,000	1,000,000	1,000,000	700	700	700	700	100,000	100,000	2,000	2,000
		MADEP Background	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
		UCL	~	~	~	~	10,000,000	10,000,000	~	~	7,000	7,000	10,000,000	10,000,000	5,000,000	5,000,000	2,000,000	2,000,000
Sample Identification	**Depth**	**Date**																
WA3-0-6"	0-6"	12/21/04	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	100
WC27-0-6"	0-6"	12/23/04	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	100
WC.5-4.5	0-6"	4/22/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WC.5-8.5	0-6"	4/22/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WC.5-12.5	0-6"	4/20/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WC.5-15.5	0-6"	4/20/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WC.5-17.14	0-6"	4/20/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WC.5-19.5	0-6"	4/25/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WC.5-22.5	0-6"	4/25/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WC.5-26.5	0-6"	4/25/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WD.5-17.46	0-6"	4/20/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WE.5-3	0-6"	4/25/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
Duplicate 220 (WE.5-3)	0-6"	4/25/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20
WF8-0-6"	0-6"	12/21/04	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	100
WG-3(0-6")	0-6"	12/22/04	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	100
WG-4 (0-6")	0-6"	12/22/04	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	100
WH-5 (0-6")	0-6"	12/22/04	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	5	ND	100
WI.5-4	0-6"	4/22/05	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	20

NOTES:
ND = not detected above method detection limit
RCS-1 = Massachusetts Contingency Plan
Gray shading indicates concentration exceeding

Table 4
Laboratory Analytical Results - Pesticides
Wetlands

			4,4'-DDD		4,4'-DDE		4,4'-DDT		Dieldrin		Endosulfan I		Endosulfan II		Endosulfan sulfate		Endrin		Endrin aldehyde	
			(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL
		RCS-1	100,000	100,000	500,000	500,000	700	700	50,000	50,000	50,000	50,000	6,000	6,000	50,000	50,000	100,000	100,000	100,000	100,000
		MADEP Background	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~	~
		UCL	5,000,000	5,000,000	~	~	90,000	90,000	~	~	~	~	500,000	500,000	~	~	~	~	~	~
Sample Identification	**Depth**	**Date**																		
WA3-0-6"	0-6"	12/21/04	ND	10	ND	10	ND	10	ND	10	ND	5	ND	10	ND	10	ND	10	ND	10
WC27-0-6"	0-6"	12/23/04	ND	10	ND	10	ND	10	ND	10	ND	5	ND	10	ND	10	ND	10	ND	10
WC.5-4.5	0-6"	4/22/05	ND	2	ND	2	ND	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WC.5-8.5	0-6"	4/22/05	ND	2	ND	2	ND	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WC.5-12.5	0-6"	4/20/05	ND	2	ND	2	ND	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WC.5-15.5	0-6"	4/20/05	ND	2	ND	2	ND	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WC.5-17.14	0-6"	4/20/05	ND	2	ND	2	ND	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WC.5-19.5	0-6"	4/25/05	ND	2	ND	2	ND	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WC.5-22.5	0-6"	4/25/05	10	2	30	2	31	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WC.5-26.5	0-6"	4/25/05	36	2	8	2	73	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WD.5-17.46	0-6"	4/20/05	ND	2	ND	2	ND	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WE.5-3	0-6"	4/25/05	ND	2	ND	2	ND	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
Duplicate 220 (WE.5-3)	0-6"	4/25/05	64	2	94	2	213	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2
WF8-0-6"	0-6"	12/21/04	ND	10	ND	10	ND	10	ND	10	ND	5	ND	10	ND	10	ND	10	ND	10
WG-3(0-6")	0-6"	12/22/04	ND	10	ND	10	ND	10	ND	10	ND	5	ND	10	ND	10	ND	10	ND	10
WG-4 (0-6")	0-6"	12/22/04	ND	10	ND	10	ND	10	ND	10	ND	5	ND	10	ND	10	ND	10	ND	10
WH-5 (0-6")	0-6"	12/22/04	ND	10	ND	10	ND	10	ND	10	ND	5	ND	10	ND	10	ND	10	ND	10
WI.5-4	0-6"	4/22/05	80	2	32	2	217	2	ND	2	ND	1	ND	2	ND	2	ND	2	ND	2

NOTES:
ND = not detected above method detection limit
RCS-1 = Massachusetts Contingency Plan
Gray shading indicates concentration exceeding

Table 4
Laboratory Analytical Results - Pesticides
Wetlands

			Endrin Ketone		Heptachlor		Heptachlore epoxide		Methoxychlor		Toxaphene	
			(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL
		RCS-1	700	700	1,000,000	1,000,000	500,000	500,000	10,000	10,000	100,000	100,000
		MADEP Background	~	~	~	~	~	~	~	~	~	~
		UCL	10,000,000	10,000,000	~	~	~	~	900,000	900,000	10,000,000	10,000,000
Sample Identification	**Depth**	**Date**										
WA3-0-6"	0-6"	12/21/04	ND	10	ND	5	ND	5	ND	50	ND	5,000
WC27-0-6"	0-6"	12/23/04	ND	10	ND	5	ND	5	ND	50	ND	5,000
WC.5-4.5	0-6"	4/22/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WC.5-8.5	0-6"	4/22/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WC.5-12.5	0-6"	4/20/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WC.5-15.5	0-6"	4/20/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WC.5-17.14	0-6"	4/20/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WC.5-19.5	0-6"	4/25/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WC.5-22.5	0-6"	4/25/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WC.5-26.5	0-6"	4/25/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WD.5-17.46	0-6"	4/20/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WE.5-3	0-6"	4/25/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
Duplicate 220 (WE.5-3)	0-6"	4/25/05	ND	2	ND	1	ND	1	ND	10	ND	1,000
WF8-0-6"	0-6"	12/21/04	ND	10	ND	5	ND	5	ND	50	ND	5,000
WG-3(0-6")	0-6"	12/22/04	ND	10	ND	5	ND	5	ND	50	ND	5,000
WG-4 (0-6")	0-6"	12/22/04	ND	10	ND	5	ND	5	ND	50	ND	5,000
WH-5 (0-6")	0-6"	12/22/04	ND	10	ND	5	ND	5	ND	50	ND	5,000
WI.5-4	0-6"	4/22/05	ND	2	ND	1	ND	1	ND	10	ND	1,000

NOTES:
ND = not detected above method detection limit
RCS-1 = Massachusetts Contingency Plan
Gray shading indicates concentration exceeding

Table 5

Laboratory Analytical Results – Herbicides

McCoy Field
Project No. 02685

Table 5
Laboratory Analytical Results - Herbicides
Wetlands

			Herbicides													
			2,4-D		2,4,5-TP (Silvex)		Dicamba		Dichloroprop		2,4,5-T		2,4-DB		Dinoseb	
			(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL	(ug/kg)	RL
RCS-1			**30**	**30**	**1,000**	**1,000**	**30**	**30**	**1,000**	**1,000**	**300**	**300**	**20**	**20**	**400**	**400**
MADEP Background			**20**	**20**	**50**	**50**	**3**	**3**	**40**	**40**	**600**	**600**	**1**	**1**	**1**	**1**
Toxicity Characteristic (20 Times) Rule			**100**	**100**	**2,000**	**2,000**	**20**	**20**	**100**	**100**	**100**	**100**	**4**	**4**	**20**	**20**
Regulatory Limit			**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**	**~**
UCL			**300**	**300**	**10,000**	**10,000**	**800**	**800**	**10,000**	**10,000**	**6,000**	**6,000**	**600**	**600**	**10,000**	**10,000**
Sample Identification	**Depth**	**Date**														
WA3-0-6"	0-6"	12/21/04	ND	**250**	ND	25	ND	25	ND	250	ND	25	ND	**250**	ND	25
WC27-0-6"	0-6"	12/23/04	ND	**250**	ND	25	ND	25	ND	250	ND	25	ND	**250**	ND	25
WC.5-4.5	0-6"	4/22/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WC.5-8.5	0-6"	4/22/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WC.5-12.5	0-6"	4/20/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WC.5-15.5	0-6"	4/20/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WC.5-17.14	0-6"	4/20/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WC.5-17-46	0-6"	4/20/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WC.5-19.5	0-6"	4/25/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WC.5-22.5	0-6"	4/25/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WC.5-26.5	0-6"	4/25/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WE.5-3	0-6"	4/25/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
Duplicate 220 (WE.5-3)	0-6"	4/25/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6
WF8-0-6"	0-6"	12/21/04	ND	**250**	ND	25	ND	25	ND	250	ND	25	ND	**250**	ND	25
WG-3(0-6")	0-6"	12/22/04	ND	**250**	ND	25	ND	25	ND	250	ND	25	ND	**250**	ND	25
WG-4 (0-6")	0-6"	12/22/04	ND	**250**	ND	25	ND	25	ND	250	ND	25	ND	**250**	ND	25
WH-5 (0-6")	0-6"	12/22/04	ND	**250**	ND	25	ND	25	ND	250	ND	25	ND	**250**	ND	25
WI.5-4	0-6"	4/22/05	ND	16	ND	1.6	ND	1.6	ND	16	ND	1.6	ND	16	ND	1.6

NOTES:
ND = not detected above method detection limit
RCS-1 = Massachusetts Contingency Plan Method 1 Soil Standard for category S-1 soil.
Gray shading indicates concentration exceeding the RCS-1 standard.

Figure 1

Locus Map

BETA Group, Inc.
Engineers · Scientists · Planners

315 Norwood Park South
Norwood, MA 02062 781.255.1982
email: BETA@BETA-inc.com

McCOY FIELD/NEW KEITH MIDDLE SCHOOL PROPERTY
New Bedford, Massachusetts

Figure No. 1

USGS Locus Map

C:\2600s\2685 – New Bedford Sampling Plan\Locus Maps\New Bedford Locus Map.dwg May 13,2005 3:15pm

Figure 2

Wetlands Remediation Area
& Sample Locations

LEGEND

PROPERTY LINE

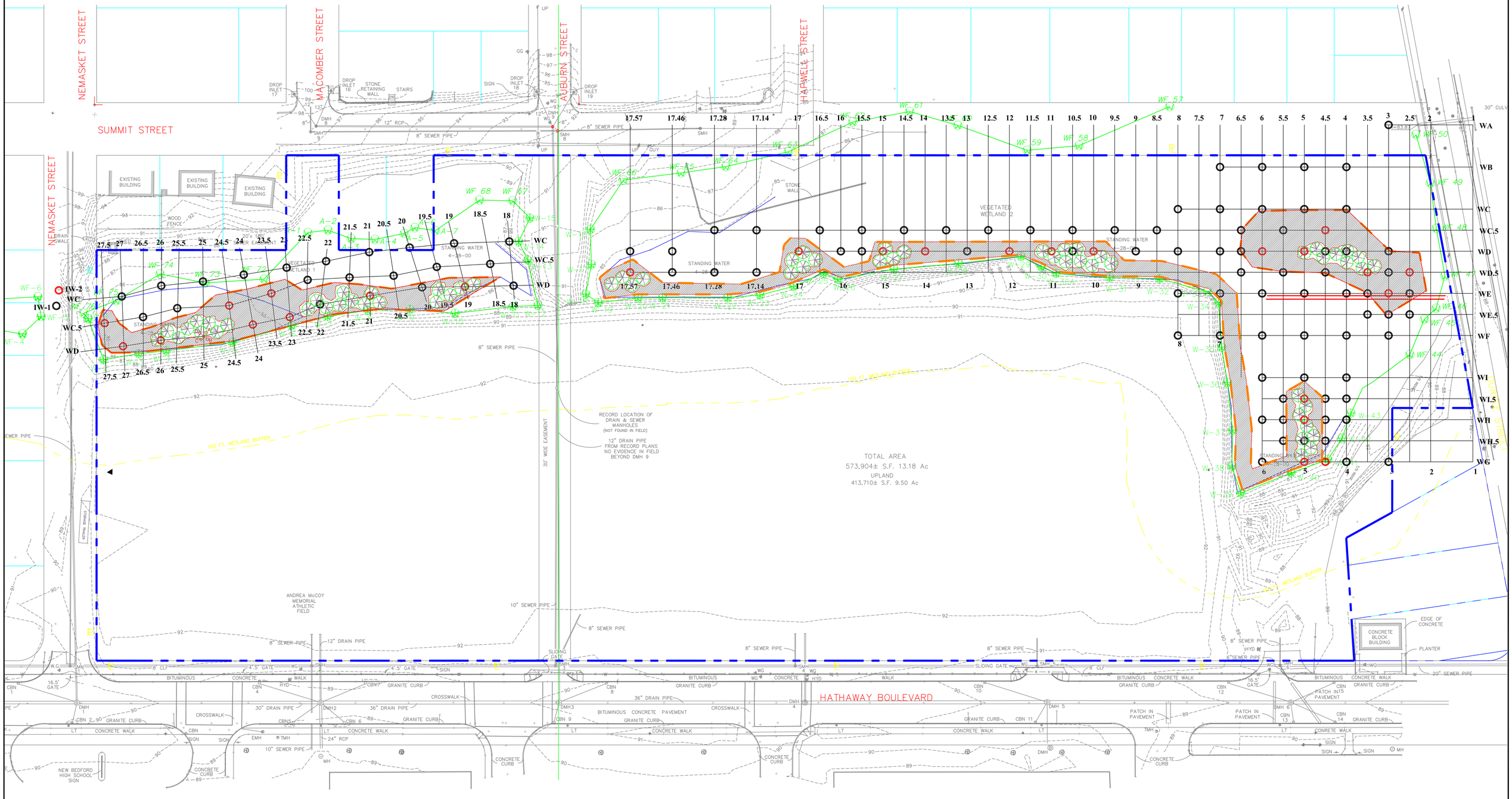
WETLANDS LINE

WETLANDS AREA SAMPLE < 1 PPM PCBs

WETLANDS AREA SAMPLE >= 1 PPM PCBs

BOUNDARY OF INITIAL WETLANDS SEDIMENT REMOVAL (0–6")

NOTE: Alpha-numeric grid corresponds to wetlands area samples. For example, sample WA3-0-6" coincides with grid intersection (WA, 3).



NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

REVISIONS

DRAWN BY:

DEPT. CHECK:

PROJ. CHECK:

Permitting Plans
Not for Construction

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315 Norwood Park South
Norwood, MA 02062
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email: BETA@BETA4nc.com

SCALE: 1"=40'

Risk-Based Cleanup Request
Figure 2
Wetlands Remediation Area
McCoy Field
New Bedford, Massachusetts

JOB 02685.00

FILE NO. Figures 2 thru 3REVISED.dwg

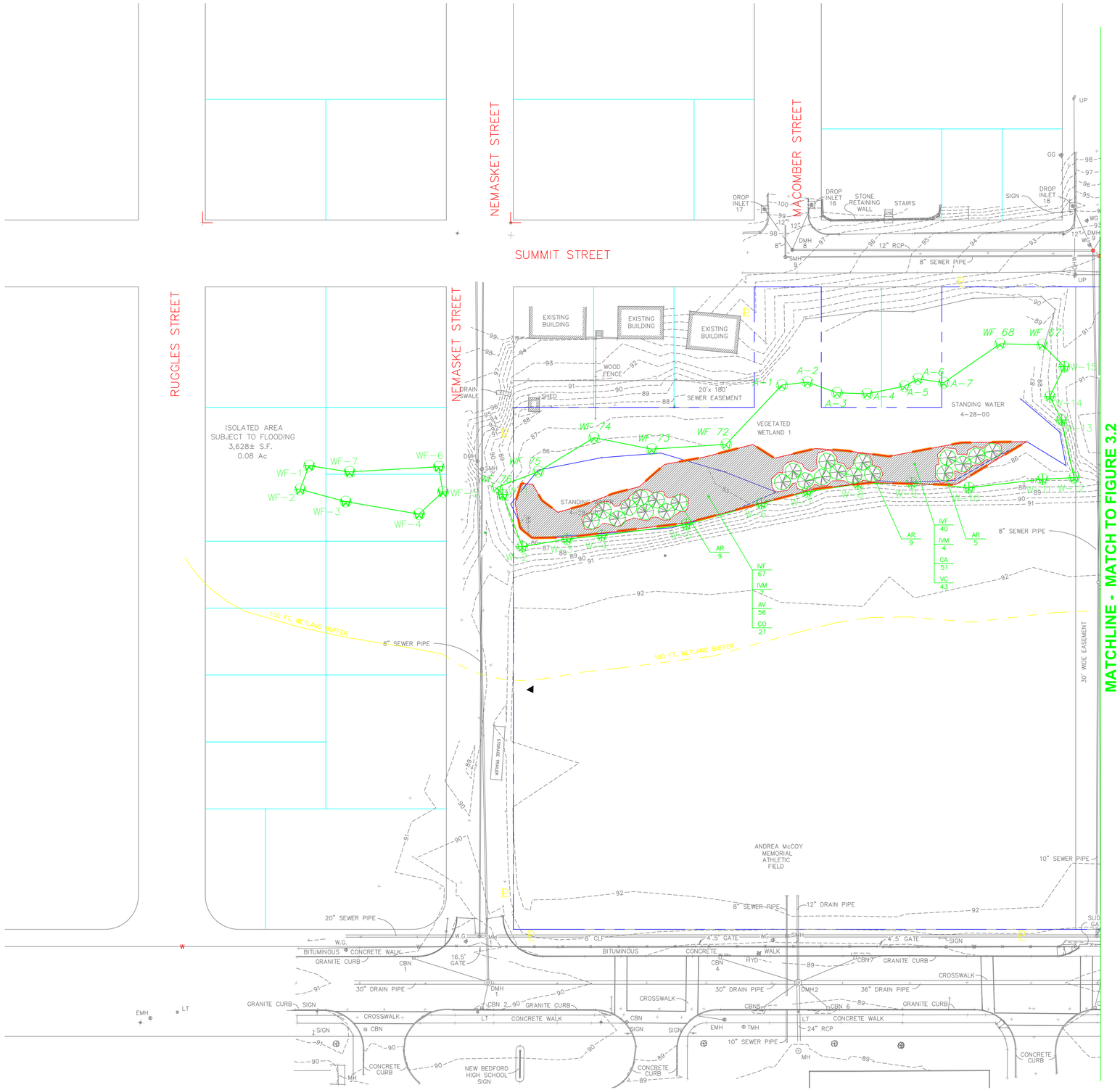
PLOT DATE June 2005

SHEET Figure 2

J:\Projects\2600s\2685 – New Bedford Sampling Plan\AutoCad Files\Risk-based Cleanup Request\Site Wetlands\Figures 2 thru 3REVISED.dwg Jun 23, 2005 2:18pm

Figure 3.1

Wetlands Planting Plan –
Vegetated Wetland 1



PLANT LIST – THIS SHEET ONLY					
Key	Botanical Name *Common Name*	Qty.	Size	Notes	Spacing
	TREES				
AR	Acer rubrum *Red Maple*	23	5'–6'	B&B	12' O.C.
	SHRUBS				
AV	Rhododendron viscosum *Swamp Azalea*	56	15"–18"	Cont.	8' O.C.
CA	Clethra alnifolia *Sweet Pepperbush*	51	15"–18"	Cont.	8' O.C.
CO	Cephalanthus occidentalis *Buttonbush*	21	15"–18"	Cont.	8' O.C.
IVF	Ilex verticillata 'Female' *Female Winterberry*	107	15"–18"	Cont.	8' O.C.
IVM	Ilex verticillata 'Male' *Male Winterberry*	11	12"–15"	Cont.	8' O.C.
VC	Viburnum corymbosum *Highbush Blueberry*	43	15"–18"	Cont.	8' O.C.

SEE THIS SHEET FOR TOTAL PLANT LIST.

TOTAL PLANT LIST					
Key	Botanical Name *Common Name*	Qty.	Size	Notes	Spacing
	TREES				
AR	Acer rubrum *Red Maple*	63	5'–6'	B&B	12' O.C.
	SHRUBS				
AV	Rhododendron viscosum *Swamp Azalea*	148	15"–18"	Cont.	8' O.C.
CA	Clethra alnifolia *Sweet Pepperbush*	138	15"–18"	Cont.	8' O.C.
CO	Cephalanthus occidentalis *Buttonbush*	33	15"–18"	Cont.	8' O.C.
IVF	Ilex verticillata 'Female' *Female Winterberry*	188	15"–18"	Cont.	8' O.C.
IVM	Ilex verticillata 'Male' *Male Winterberry*	18	12"–15"	Cont.	8' O.C.
VC	Viburnum corymbosum *Highbush Blueberry*	188	15"–18"	Cont.	8' O.C.

Remediation Area

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

REVISIONS

DRAWN BY:

DEPT. CHECK:

PROJ. CHECK:

Permitting Plans
Not for Construction

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SCALE: 1"=40'

Risk-Based Cleanup Request
Figure 3.1
Planting Plan for Vegetated Wetland 1
McCoy Field
New Bedford, Massachusetts

JOB 02685.00
FILE NO. Figures 2 thru 3REVISED.dwg
PLOT DATE June 2005
SHEET Figure 3.1

Figure 3.2

Wetlands Planting Plan –
Vegetated Wetland 2

MATCHLINE - MATCH TO FIGURE 3.1

PLANT LIST – THIS SHEET ONLY					
Key	Botanical Name *Common Name*	Qty.	Size	Notes	Spacing
	TREES				
AR	Acer rubrum *Red Maple*	40	5'–6'	B&B	12' O.C.
	SHRUBS				
AV	Rhododendron viscosum *Swamp Azalea*	92	15"–18"	Cont.	8' O.C.
CA	Clethra alnifolia *Sweet Pepperbush*	87	15"–18"	Cont.	8' O.C.
CO	Cephalanthus occidentalis *Buttonbush*	12	15"–18"	Cont.	8' O.C.
IVF	Ilex verticillata 'Female' *Female Winterberry*	81	15"–18"	Cont.	8' O.C.
IVM	Ilex verticillata 'Male' *Male Winterberry*	7	12"–15"	Cont.	8' O.C.
VC	Viburnum corymbosum *Highbush Blueberry*	145	15"–18"	Cont.	8' O.C.

SEE FIGURE 3.1 FOR TOTAL PLANT LIST.

Remediation Area

Biobarrier

AUBURN STREET

HARWELL STREET

DURFEE STREET

HATHAWAY BOULEVARD

VEGETATED WETLAND 2

STANDING WATER 4-28-00

STONE WALL

DROP INLET 19

8" SEWER PIPE

SMH 8

SMH

UP GUY

30" CULVERT

I=83.87

CONCRETE BLOCK BUILDING

EDGE OF CONCRETE

PLANTER

20" SEWER PIPE

6"SEWER PIPE

HYD

SLIDING GATE

8' CLF

16.5' GATE

36" DRAIN PIPE

BITUMINOUS CONCRETE PAVEMENT

GRANITE CURB

CONCRETE WALK

CROSSWALK

PATCH IN PAVEMENT

CONCRETE CURB

SIGN

TMH

DMH

CBN

LT

100 FT. WETLAND BUFFER

RECORD LOCATION OF DRAIN & SEWER MANHOLES (NOT FOUND IN FIELD)

12" DRAIN PIPE FROM RECORD PLANS NO EVIDENCE IN FIELD BEYOND DMH 9

TOTAL AREA
573,904± S.F. 13.18 Ac
UPLAND
413,710± S.F. 9.50 Ac

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION

REVISIONS

DRAWN BY:

DEPT. CHECK:

PROJ. CHECK:

Permitting Plans
Not for Construction

BETA Group, Inc.
Engineers · Scientists · Planners
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Gates, Leighton & Associates, Inc.
LANDSCAPE ARCHITECTURE
865-A Waterman Ave., East Providence, RI 02914 Ph:(401)438-2071 Fax:(401)434-7511 E-mail:glari@glala.com

SCALE: 1"=40'

Risk-Based Cleanup Request
Figure 3.2
Planting Plan for Vegetated Wetland 2
McCoy Field
New Bedford, Massachusetts

JOB 02685.00

FILE NO. Figures 2 thru 3REVISED.dwg

PLOT DATE June 2005

SHEET Figure 3.2

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